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DETROIT MEDICAL JOURNAL

VOL IV. DECEMBER, 1904. NO. 9.

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THE ETIOLOGY AND SYMPTOMATOLOGY OF DIABETES MELLITUS;
George E. Fay, M. D.; - - - - 257

COMPLICATIONS OF DIABETES MELLITUS;
John E. Clark, M. D.; - - - - 261

THE TREATMENT OF DIABETES;
Frank Burr Tibbals, M. D.; - - - 265

THE TREATMENT OF ALCOHOLISM;
William J. Stapleton, Jr., M. D.; - - - 268

CYST OF THE BLADDER;
C. M. Harpster, Ph. G., M. D., - - 269

EDITORIAL; - - - - 272

EDITORIAL NOTES; - - - - - 275

NEW INSTRUMENTS AND DEVICES; - - 278

PROGRESS OF MEDICAL SCIENCE; - - 282

BOOK REVIEWS; - - - - 286

PUBLISHER'S DEPARTMENT - - - XXIII

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103 and 105 Miami Avenue, - - DETROIT, MICH.

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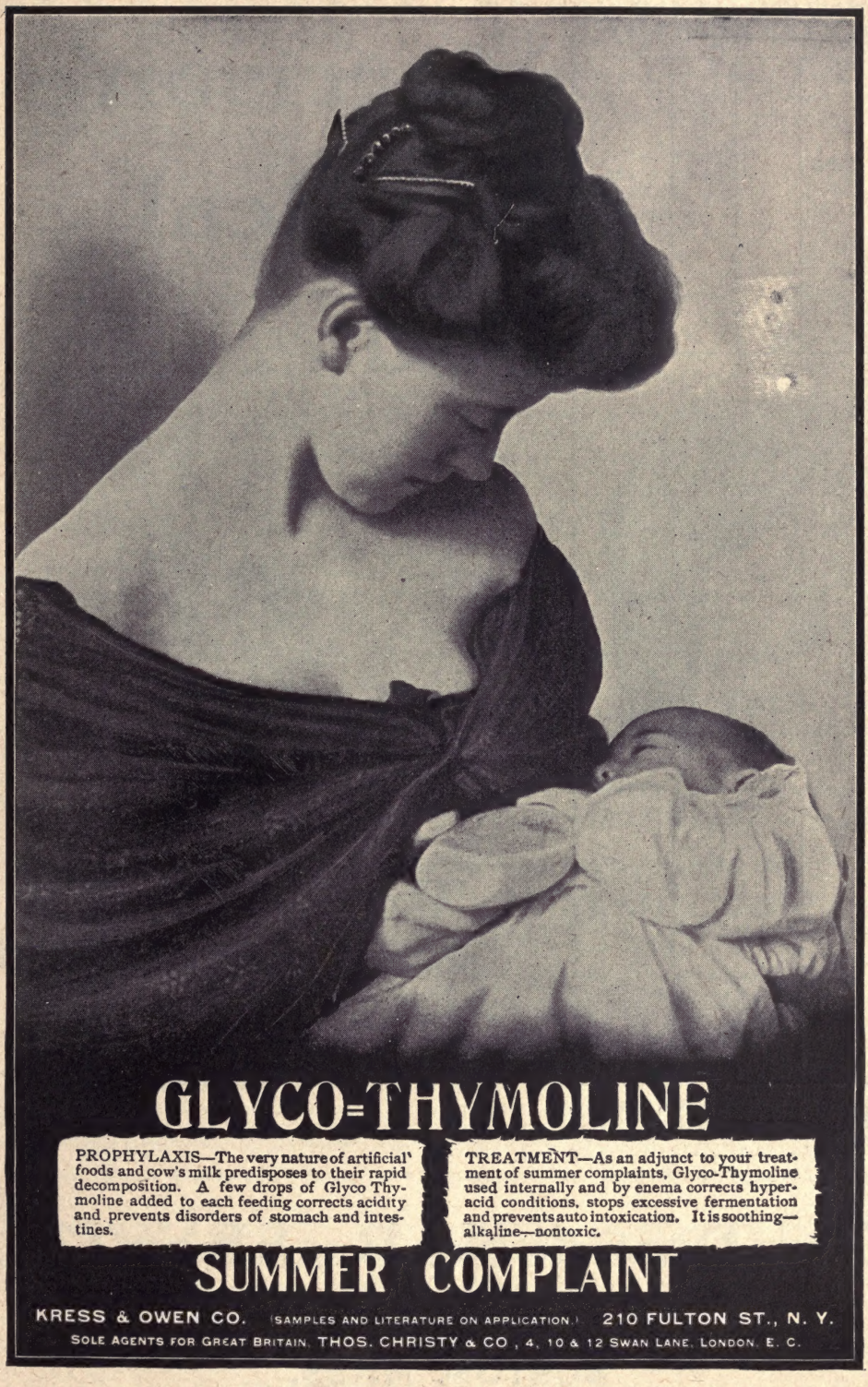
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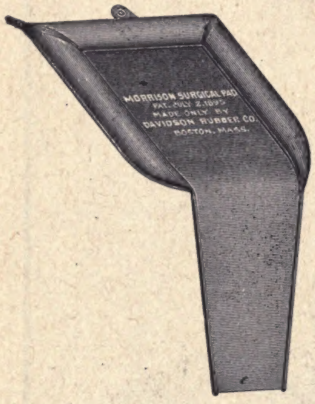

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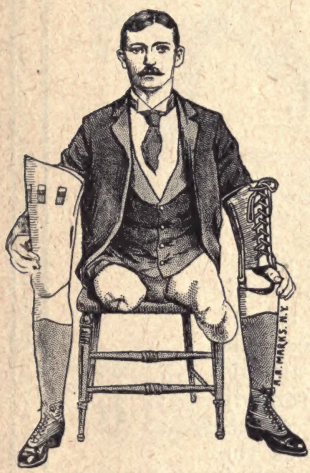

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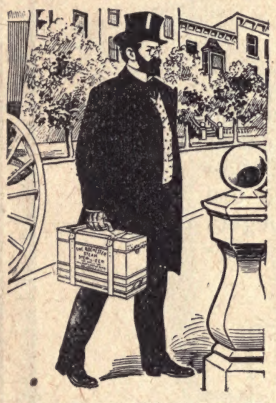

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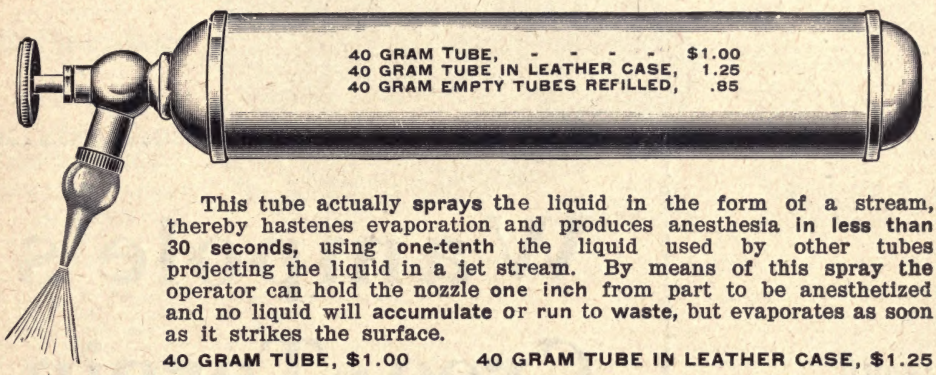

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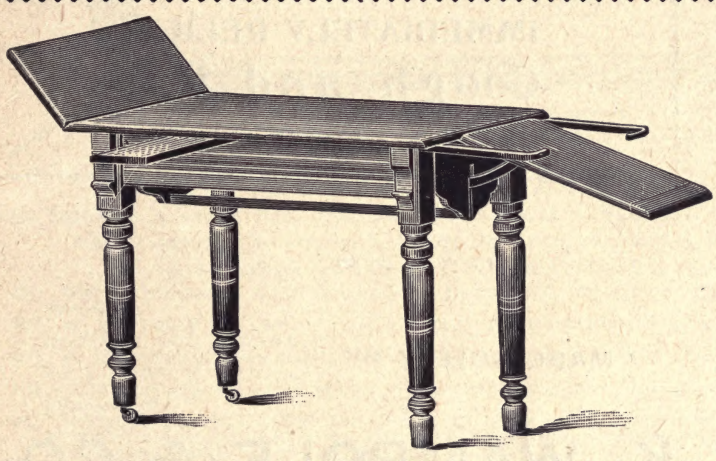

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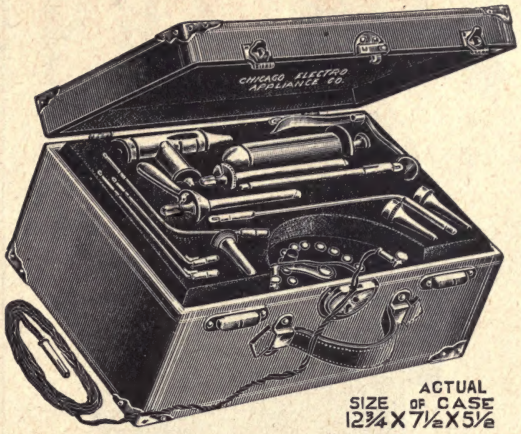

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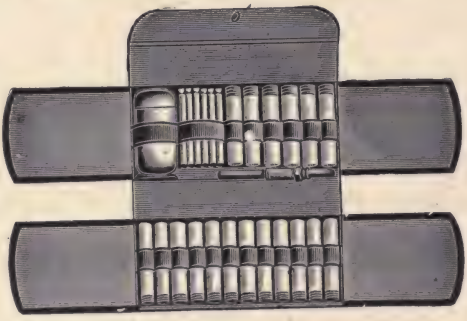

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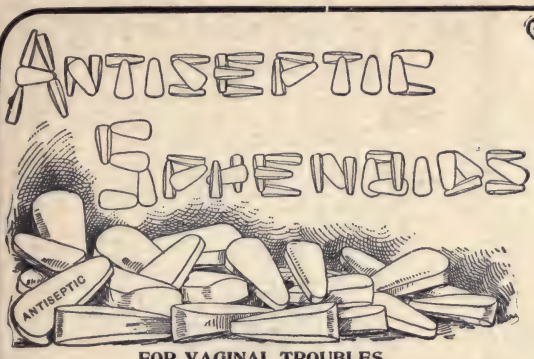

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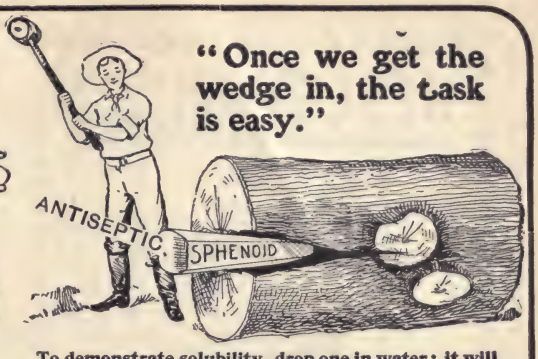

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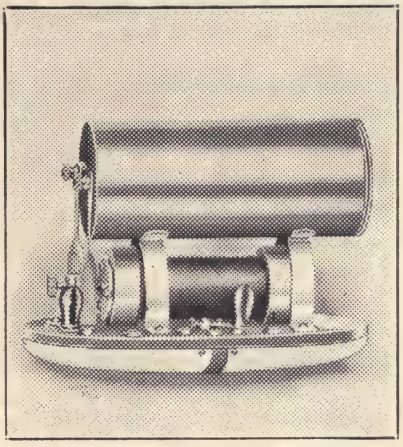

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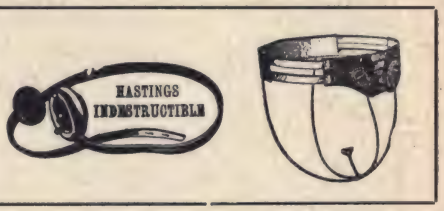

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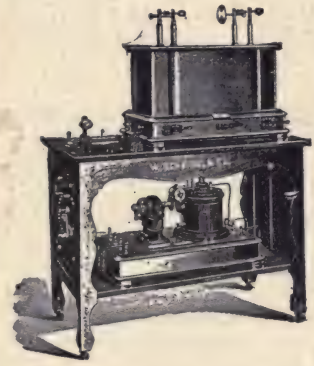

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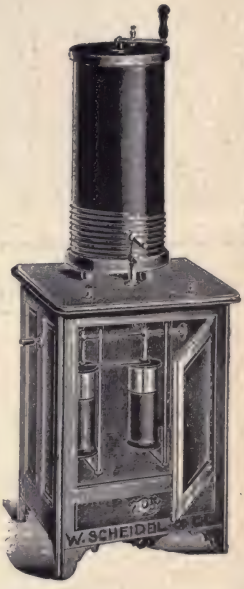

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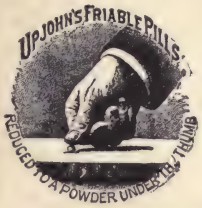

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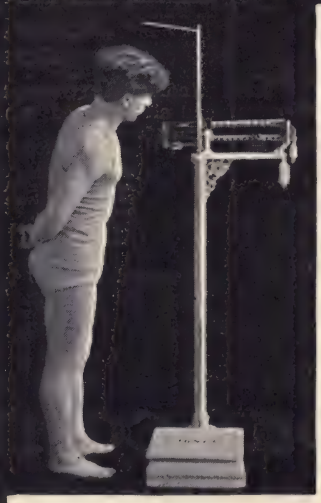

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THE DETROIT MEDICAL JOURNAL.

VOL. IV. DECEMBER, 1904. NO. 9.

THE ETIOLOGY AND SYMPTOMATOLOGY OF DIABETES MELLITUS.*

By GEORGE E. FAY, M. D.,
Detroit, Mich.

In preparing this paper, which is to be confined to the etiology and symptomatology of diabetes mellitus, it has been the aim merely to gather together the ideas of some of those authors who have worked upon this subject, both formerly and of late years, and to present them in a way calculated to be of the greatest value to the practitioner.

At the outset it would seem fitting to remark that while much has been done to disclose the etiological mysteries of this disease, those who have worked hardest to accomplish this end admit that there are still causes which remain undiscovered.

According to Osler, diabetes mellitus is a disorder of nutrition in which sugar accumulates in the blood and is excreted in the urine, with a marked daily increase of the latter. Von Noorden states that for a case to be one of diabetes mellitus it is necessary that the form of sugar thus eliminated be grape-sugar; that it must be eliminated for weeks, months or years and that the excretion of sugar must take place after the ingestion of moderate amounts of carbo-hydrates.

Diabetes may be artificially produced in the laboratory by puncture of the gray matter of the floor of the fourth ventricle of the brain near the calamus scriptorius; after extirpation of the superior cervical ganglion; after section and stimulation of the spinal cord at the level of the brachial plexus; after stimulation of the central stump of the vagus when cut and after stimulation of the central stump of the sciatic nerve when cut.

In cerebral diabetes a substance known as cerebros and represented by the formula C6 H12 O6 is found appearing in the place of ordinary grape-sugar, which it closely resembles, and with which it is isomeric.

Many of the authors referred to in this paper agree that hereditary influences play an important role in diabetes mellitus, and Schmidt has suggested also the possibility of its being contagious, citing instances of its transmissibility from husband to wife. Men are more frequently affected than women, in a ratio of 3 to 2. It is a disease of adult life, the majority of cases occurring between the thirtieth and the sixtieth years—there being a greater tendency between the fifth and the sixth decade. But cases are also found among very young children, even as early as the second year.

A number of authors claim that the Hebrew race is the most susceptible of all races, but this is supposed by others to be only another instance of hereditary influence at work.

Diabetes mellitus is rare in America as compared with its prevalence in European countries, in a ratio of 3.8 to 1,000. But Hare concludes that the affection is

*Read before the Wayne County Medical Society, Nov. 7, 1904.
Detroit, Michigan, December 15, 1904.

becoming more and more common in this country and abroad. A neurotic temperament as been held responsible as a causal factor.

Mental shock, severe nervous strain and worry precede many cases, according to Osler, who further states that the combination of intense application to business, over-indulgence on food and drink with a sedentary life seem particularly prone to induce the trouble.

Injury to or disease of the brain or spinal cord are mentioned as contributing factors of diabetes.

Ebstein and Strümpel both mention cases in which there was a coincident occurrence of epilepsy and diabetes.

Diabetes may be induced by an over-indulgence in carbo-hydrates and peptones.

Normally the liver will store up glycogen to a considerable amount, where it remains until demand is made for it by the tissues, when it is carried by the blood as food in the form of sugar to the amount of 1-10 to 2-10 per cent. When, however, larger quanties of a carbo-hydrate diet are indulged in than the liver can store up as glycogen, the surplus appears in the blood as grape-sugar and is then carried by it to the kidneys, whence the excess is discharged as sugar in the urine. Disturbances of liver function will also effect the same end.

Of the various poisons, the following have been enumerated as those causing glycosuria:

Phloridzin. This is supposed to combine with the grape-sugar in the blood carrying it to the kidneys, which split up the combination, liberating the sugar and sending the drug back into the circulation to repeat the process. The phloridzin is further supposed to act upon the renal epithelium, rendering it incapable of keeping back the sugar of the blood.

Other poisons mentioned by Strümpel are: Carbon-monoxide gas, morphine, quicksilver, amyl-nitrite, curare and hydrocyanic acid.

He further adds that traumatic neuroses, beer-drinking, Basedow's disease, acute infections, such as typhoid, typhus, cholera, diphtheria, scarlet fever and malaria sometimes cause a transitory glycosuria. He says that the condition has also followed brain lesions and hemorrhage of the brain, fractures of the skull, cerebro-spinal meningitis, epilepsy, acromegaly, diseases of the medulla and cirrhosis of the liver.

He characterizes the causes of glycosuria as *endogenous*, including heredity and cases of the disease in early childhood and infancy, and *exogenous*, including infections, injuries and indiscretions of diet.

Of late years the pancreas has been studied especially in relation to diabetes.

Von Mehring and Minkowski have long maintained that the pancreas performs a double function of furnishing both an internal and an external secretion. The latter is in the form of the digestive fluids which act in the intestine and whose function is well understood. Of the internal secretion much less is known, but Opie, of Johns Hopkins University, Mayo-Robinson and Moynahan, of London, and others have done considerable in the attempt to advance our knowledge in this direction.

Howell, of Johns Hopkins, and the authors just named have performed a number of experiments upon many of the lower animals, recording the following results:

Extirpation of the pancreas causes glycosuria and polyuria as in diabetes, even if a carbo-hydrate diet be withheld. There is also an increase of urea and hunger and thirst become marked.

One-fourth to one-fifth of the pancreatic tissue allowed to remain in the body has been found sufficient to off-set these

diabetic symptoms, even though its connection with the duodenum be entirely interrupted, thus indicating that the pancreatic juice is not responsible for glycosuria.

Further, the pancreas may be completely extirpated and a portion of the gland implanted in the abdominal cavity or even under the skin and symptoms will be prevented unless the implanted portion be too small.

The duct of Wirsung and the accessory pancreatic ducts have been ligated or occluded with paraffine without seriously disturbing the healthy condition of the animal.

It is by such evidence as this, therefore, that the conclusion has been reached that the pancreas produces a substance of some kind which is given off to the blood or lymph—an internal secretion—which is either necessary for the normal consumption of sugar in the body, or normally restrains the out-put of sugar from the liver and other sugar-producing organs of the body; or, that the pancreas itself may destroy some product which accumulates in the body and hinders normal assimilation of sugar.

In his recent work, entitled "Diseases of the Pancreas," Dr. E. L. Opie has devoted considerable of his discussion to the relation of pancreatic affections to diabetes mellitus. His work embodies much of the latest knowledge on this subject.

He advances a view which strongly favors the theory that this disease appears to be dependent upon those pathological processes occurring in the pancreas which involve especially the islands of Langerhans. Ziegler states that the cause of hyaline degeneration is as yet unknown. It would appear that if its cause could be assigned, one of the most important etiological factors of diabetes would be disclosed. And yet this would not be the universal cause, for Opie, Hansemann, Diekhoff, Seegen and a number of others have found that generally when any pathological change goes on in the pancreatic tissue which obliterates or almost entirely obliterates Langerhans' areas, diabetes results. But to this last statement exceptions have also been made, as in the case of diffuse primary carcinoma of the pancreas, in two isolated instances reported by Hansemann. In these cases the cancer tissue was found to completely replace the normal pancreatic cells without the incidence of diabetic symptoms. Hansemann accounts for this by assuming that the cancerous cells which find their origin in the pancreatic tissue perform the function of such tissue. He cites the observation that primary carcinoma of the adrenal is usually unaccompanied by Addison's disease.

But in answer to this argument Scobolow has declared that "should we believe that the internal function of the pancreas is performed by the islands of Langerhans, carcinomata arising from these structures could alone supply this deficiency." This would be a very rare condition. An answer to this argument does not appear to have been recorded.

Opie gives in his series of nineteen cases of diabetes in which the pancreas showed the following pancreatic changes:

Chronic interlobular pancreatitis with calculi, one case.

Chronic interacinar pancreatitis, three cases.

Hyaline degeneration of the islands of Langerhans, with, in some instances, interacinar pancreatitis, seven cases.

Atrophic pancreas, four cases.

Normal pancreas, four cases.

Such cases as the last mentioned four do much to discourage the theory that the islands of Langerhans must be involved. On the other hand, it is of interest to note that in cases of hyaline degeneration of pancreatic tissue, in which the islands of Langerhans are not involved,

diabetes has not been found to exist, whereas, when this degenerative process does include the interacinar islands or involves them alone, diabetes has always been reported.

The following pathological processes in the pancreas are those found co-existent with diabetes:

Carcinoma, with obstruction of the duct or destruction of the gland. (The obstruction of the duct probably sets up a general inflammatory process.)

Simple atrophy and interstitial inflammation.

Pancreatitis with hyaline degeneration, acute and chronic.

Cysts and lipomatosis.

Accompanying diabetes, diminution in the size of the pancreas has been noticed more than any other abnormality.

With the internal secretion theory in mind, it would appear that certain substances might be extracted from the pancreas which could be administered to diabetic patients, if not as a therapeutic measure, as a diagnostic aid in determining whether the trouble is due to a pancreatic, nervous or some other disease. All attempts at benefitting the condition of such patients by feeding pancreas or its products have, however, proved fruitless up to the present time.

Of all the various theories thus far advanced as to the etiology of diabetes, that which is based upon the assumption that the involvement or destruction of the areas of Langerhans by some pathological change is the chief cause, would appear to carry most weight in its favor.

Symptomatology.

In introducing the subject of the symptomatology of diabetes, little beside a mere enumeration of the well known symptoms will be offered, as the great portion of time allotted to this paper has already been consumed in the more interesting topic of etiology.

The onset of the disease is usually gradual, but it may suddenly follow an emotion or a chill.

Probably the first symptom noticed is the excessive thirst and the passage of frequent and increased amounts of urine. In the late stages the urine may have a sweetish odor, and in some cases when coma is approaching or present, acetone may be detected.

In the very young and in the middle-aged, emaciation is progressive and rapid. In most cases of diabetes in children the course is short, as the disease is usually fatal. But patients past the middle period of life may have the disease for years and remain well-nourished and undisturbed in health.

The amount of water consumed will be found, according to Osler, to bear a definite ratio to the quantity excreted. The thirst is most intense an hour or two after meals.

Digestion is usually good and the appetite inordinate. The loss of flesh bears some ratio to the polyuria. When under suitable diet the sugar is reduced, the patient may gain rapidly in flesh. But there are cases showing little or no loss of weight and others in which there is not great thirst or the passage of excessive quantities of urine.

The tongue is usually dry, red and glazed, and the saliva is scanty.

The gums may become swollen and in the later stages aphthous stomatitis is common. Constipation is the rule. Excepting for the urine, in diabetes the secretions are diminished.

Musser says that the occurrence of any of the following symptoms should lead to an examination of the urine for sugar and an estimation of the quantity of urine passed in twenty-four hours, apart from the routine examination which should be made in every case of chronic or obscure acute diseases:

Muscular weakness without known cause,

Emaciation,

Hunger and thirst, if excessive, and

Loss of sexual power.

In diabetes the specific gravity of the urine ranges from 1025 to 1045 and sugar is found by the ordinary tests.

Boils, carbuncles, pruritus and gangrene of the extremities should always suggest diabetes to the mind of the physician.

Musser goes on to state that lung complications are common in diabetes and it has been of interest to note in the series of autopsies reported by Opie that nearly every case showed lung involvement of some kind—usually tuberculous.

Coma, peripheral neuritis, neuralgia, peripheral hyperæsthesia or paræsthesia are suggestive of diabetes.

The coma is caused by the presence of acetone in the blood. This can be demonstrated at such times in the urine also.

In diabetes, bronzing of the skin is often seen—apparently the result of the cachexia. It is possible that it is due to the liver cirrhosis which causes the glycosuria. But if the pancreas is primarily at fault, the skin change is more likely to occur.

A number of eye and ear symptoms may be caused by this disease. Of these, the following are the more common: Myopia, retinitis, optic atrophy, amblyopia, amaurosis and paresis of the ocular muscles. Cataract has also been associated with diabetes. When retinitis occurs it is usually seen late in the disease.

Glycosuric amblyopia may exist without visible structural changes in the eye.

In a case recently observed by me, glycosuric amblyopia and trifacial neuralgia were among the most pronounced of the symptoms.

Tinnitus aurium, deafness and acute otitis are phenomena which sometimes arise in the disease.

The subject of this paper seems to me to be one of especial interest and to possess great possibilities for the investigator—having at hand, as he has, so much aid in modern laboratory equipment.

502 Washington Arcade.

COMPLICATIONS OF DIABETES MELLITUS.*

By JOHN E. CLARK, M. D.,
Detroit, Mich.

The part assigned me to consider this evening has at least the merit of giving us a positive basis for departure. The etiology of diabetes as you have heard, is very doubtful. Age, sex, wealth, contagion, heredity, conjugal state, traumatism, syphilis, gout, pancreas, psychoses, toxines, adrenals et al., are possible causes, while the treatment is as prolific and varied as the disease is protean in its manifestations. Unfortunately, however, its complications are definite and distressing, and rarely if ever absent in more or less intensity in every case which goes to a fatal termination. Their name is legion, and I shall not attempt an enumeration even by name, but shall confine myself to a consideration of a few from my personal observation.

*Read before the Wayne County Medical Society, Nov. 7, 1904.

The classification of complications as given by Lepine in Sarjou's Annual, will prove probably the most satisfactory, and are those affecting:

1st,—The digestive apparatus;

2d,—The nervous system;

3d,—The vascular system;

4th,—The respiratory tract;

5th,—The urinary tract;

6th,—The skin and locomotor apparatus.

Prominent among the disorders of the digestive tract, (and I believe I am right in assigning this complication to the disturbance of the carbo-hydrate metabolism) are the ocular changes which frequently occur in the course of a glycosuric affection. This has been particularly impressed upon me in three cases which have recently come under my observation.

Albuminuric retinitis and accompanying visual disturbances are well known complications of renal affections, but in diabetic conditions, these complications are more rare, and not looked upon with the same sense of gravity as in the other form, although in one case to which I have referred above, before death the patient contracted a formidable hemorrhagic retinitis, with almost total optic nerve atrophy. N. L. Pyle (in *American Medicine*, April 19, '92), makes the following statement, showing the necessity for careful consideration of eye symptoms, even when constitutional and urinary symptoms are not marked. He says: "Glycosuria should be suspected in the following conditions:

"(a),—Premature presbyopia;

"(b),—Unexplained mydriasis, or cycloplegia;

"(c),—Sudden change in the refraction; particularly marked development or increase of myopia past middle age, without cataractous changes;

"(d),—Intractable iritis;

"(e),—Cataract in young or middle aged persons:

"(An examination of the urine is advisable even in cases of senile cataract, as the etiology has a bearing on the prognosis of operations);

"(f),—Retinitis, particularly of the hemorrhagic variety;

"(g),—Unexplained optic nerve atrophy;

"(h),—Sudden and marked amblyopia, particularly central without fundus changes."

I have a patient at present, a female who has complained of difficulty of distance sight, and at the same time is unable to read without glasses. She is passing an enormous quantity of urine, 7200 cubic centimeters in 24 hours. Sp. Gr. 1038, 5.75 per cent. of sugar. In this case there is a hemorrhagic type of retinitis, with small punctate spots suggestive of hemorrhages.

I am also treating a boy eight years of age who passes in the 24 hours over 6000 c.c of urine. Sp. Gr. 1036, and 6.6 per cent. of sugar. This enormous excretion of solids will be better appreciated with the statement that his weight is under sixty pounds. In this case there is marked myopia, but no cataract formation. I have not had a retinal examination as yet.

In another case, seen with me by Dr. H. O. Walker, in which death ensued from diabetic coma, there were present interesting retinal changes. Here the punctate retinal hemorrhages accompanied by rectangular reflecting silver-white spots characteristic of glycosuria, were present with a typical albuminuria retinitis, a mixed picture of much interest to the ophthalmologist. The retinal changes in glycosuria according to N. L. Pyle differ so distinctly as to be readily determined with the ophthalmoscope, inasmuch as the inflammation of the optic nerve is never present in glycosuria, a condition so prominent in albuminuria, syphilis and other blood dyscrasias. According to Saundly (*Medical Review*, January, '93), the patches in glycosuria are never arranged in fan shape, and are never associated with papillitis or diffuse retinitis.

Bouchardat has been criticised for un-

duly exaggerating diminution of memory, a growing indifference, loss of aptitude for intellectual work, and a tendency to anger, melancholy and hypochondria as noteworthy complications of glycosuria. I am inclined, however, to indorse his position, and to doubt a statement of his critic that these symptoms are not usually met with in diabetic subjects, "Independently of the many cases in which heredity plays an important part."

Pneumaturia.—This is a rare complication which has come under my observation but once, in a male, age 67, of active habits, and in a condition of melancholia. My attention was first drawn to it by a statement of the patient that micturition was often accompanied by an explosion similar to opening a pop bottle, and "fizzed," after passing. Urine was cloudy, and a microscopical examination showed innumerable micro-organisms of the yeast-plant, Torulæ Cerevisiae. When we consider that sugar was present in this case in about 4 per cent., and that it is completely decomposed into carbonic anhydride and water by the action of the Torulæ, we can understand the phenomona, and appreciate the exactness of the patient's description.

One of the most alarming complications occuring in the case of a glycosuria patient is that of gangrene, which occasionally happens, generally following some accidental condition, such as a corn on the foot, or as I experienced in one case the application of carbolic dressing to the great toe for in-growing toe nails. It is of two varieties, the moist, depending upon the condition of the blood, and the dry, claimed to be the result of arteriosclerosis. An annoying cutaneous complication is pruritis and eczema. Carbuncle is also frequently met with.

The most serious and usually the last stage of all, in these cases, is diabetic coma, a condition which when once present rarely disappears, except with the life of the patient.

Th. Rumpf, in discussing the cause of diabetic coma (in the *Zeitschrift f. klinische Medizin*, B. 45), follows the lead of Hallerworder in '97 and Stadelmann and Nauyn, that diabetic coma is due to an acid poison in the blood, consisting of beta-oxy-butyric and diacetic acids combined with an excretion of ammonia, these being the result of the decomposition of the body albumins.

A theory accepted some decades ago (probably due to the fact that free ammonia was discovered in the urine), explained the onset of coma by the assumption that the urea decomposed in the system, thus freeing the ammonia, as follows:

$$CH_4N_2O + 2H_2O = (NH_4)_2CO_3$$

Urea Ammonia carbonate.

But the occurrence of acidosis in severe forms of diabetes and especially in these cases of coma, is unquestioned. Another interesting condition is acetonuria, which was thought at one time to be a causative factor in coma. This, however, is not accepted in its entirety at the present time, although it undoubtedly adds much to the gravity of the case; showing that oxy-butyric acid is present in excessive quantities in the blood.

The following equations will illustrate the possible changes:

$$C_4H_8O_3 + O = C_4H_6O_3 + H_2O$$

oxy-butyric acid diacetic acid

and

$$C_4H_6O_3 = C_3H_6O + CO_2$$

Acetone.

A case in the practice of Dr. G. W. Irvine that came under my observation is particularly interesting as illustrating a complication only occasionally met with, namely, diabetic neuritis. In this case the affection appeared to involve both the central and peripheral divisions of the nervous system, and simulated loco-

motor ataxia symptoms so closely as to lead a casual observer to expect an affection of the posterior root zones of the spinal cord. Complete tabetic symptoms were absent, however, although there was marked incoordination of movement and pronounced Westphal symptoms, but the Argyle-Robinson pupil and Romberg symptoms were absent, nor could any girdle sensation be elicited. The resemblance of the symptoms presented by this patient, and those of the classical spinal cord lesion were so closely allied, that one may be forgiven for a presumption that there is some pathological relation existing between a spinal sclerosis on the one hand, and the toxic condition of glycosuria on the other. There was no loss of sensation, paresis or paralysis in this case, nor sense of cushion beneath feet, so common in locomotor ataxia.

Dr. F. N. Parey, (*Lancet*, July 2, 1904), in discussing the varied phenomona of diabetic neuritis, declares that the numerous nervous symptoms are exaggerated in ratio to the amount of sugar contained in the urine. A careful quantitative analysis was made by Dr. Irvine. Sugar, urea and the amount of fluid were quantitatively estimated bi-weekly, and as a result we failed to confirm the observation of Dr. Parey. A condition in this case was, that the percentage of sugar bore no direct relation to amount of urinary excretion.

September 9, 1901, he passed 2850 c.c., sugar 6.5 per cent.

September 30, 1901, he passed 2850 c.c., sugar 6.5 per cent.

November 8, 1901, he passed 3050 c.c., sugar 5 per cent.

November 11, 1901, he passed 1845 c.c., sugar 3.5 per cent.

November 21, 1901, he passed 2670 c.c., sugar 4.1 per cent.

November 25, 1901, he passed 1950 c.c., sugar 5.5 per cent. Urea .012 per cent.

January 20, 1902, he passed 2500 c.c., sugar 9 per cent. Urea .012 per cent.

June 3, 1902, he passed 24 c.c., sugar 8 per cent. Urea .01 per cent.

July 17, 1902, he passed 2215 c.c., sugar 4.5 per cent. Urea .008 per cent.

The influence of codeia is finely illustrated in our record, viz,—

On November 4 there was 2350 c.c., with a percentage of 5.2. Codeia was administered, and on November 11, there was 1845 c.c., with a percentage of 3.5. The temporary relief it affords, however, is shown thus:—November 25 there was 1950 c.c., sugar 5.5 per cent; December 23 ensuing, 1960 c.c., with 8.5 per cent of sugar. January 20, the quantity had risen to 2500 c.c., and 9.3 per cent of sugar, a terrific reaction. At no other time during the continuance of this case did the sugar approach this figure. The last analysis we have in the case was June 17th, '02, amount 2215 c.c., sugar 4.5 per cent. The ataxic symptoms were progressive, and apparently depended scarcely at all upon the rise or fall of glycosuria.

Dr. Parey asserts that the neuritis complicating diabetes is attributable to the presence of sugar in the blood, and the treatment consists in measures directed to a reduction of the amount of sugar. In other words, as I interpret it, the tabetic symptoms are functional and disappear with the sugar. This I believe is open to dispute, although practically I doubt if it will ever be settled, as I think the recovery of a case and disappearance of the sugar in the blood after well marked ataxia symptoms are present, is unprecedented. Treatment, medication, or diet had little or no influence on the progress of our case. He grew gradually worse, mind and body synchronously, the tabetic symptoms keeping pace with the progress of the disease. His death resulted from diabetic coma.

At one time all cases in which albumin

was present in urine were called Bright's disease, and let go at that. The various modifications which we now know exist were considered in gross, and all classed together under this name. Research, however, has demonstrated that there are very many and varied conditions of albuminuria having different etiology, pathology, and symptomatology. The same within narrower limits is true of glycosuria and it is no longer scientific on discovering sugar in the urine, to say "Diabetes mellitus," and to end further diagnostic investigations. We should appreciate a suggestion of Dr. Parey as to a distinction between various diabetic cases. We have pentosuria, lactosuria, and levulosuria with their relations to the true dextrosuria, and he suggests the name "Composite diabetes" where dextrose is accompanied by beta-oxy-butyric, diacetic acid and acetone. These substances usually accompany each other, and it is the first two which indicate the gravity of a case. Treatment therefore of a case of glycosuria in which the determination of the factors which go to make up its gravity has been omitted is as absurd and illogical as the treatment of albuminuria would be without determining whether it originated from a sclerosed kidney or the football arena.

603 Washington Arcade.

THE TREATMENT OF DIABETES.*

By FRANK BURR TIBBALS, M. D.,
Detroit, Mich.

Von Noorden defines diabetes as "A disease in which the capability of the body to convert glucose is pathologically reduced." The impaired metabolism appears to be less an over-production than an under-consumption of sugar, although each factor may perhaps be taken into consideration to some extent. Inasmuch, however, as we are still ignorant regarding the underlying causes of this deranged metabolism other than from the purely theoretical standpoint, it is evident that we must approach the treatment of the diabetic as an individual rather than as one of a pathologic class amenable to a routine of treatment along hard and fast lines.

Clinically a diabetic is a patient who for a considerable length of time voids an increased amount of urine of high specific gravity, containing sugar, with usually an inordinate appetite, great thirst, progressive emaciation and muscular weakness.

Diabetes, then, is glycosuria plus these clinical evidences of disordered nutrition. Glycosuria of a temporary nature is not infrequently found in individuals of normal health from the ingestion of an excess of carbohydrates or even proteids, although the persistent recurrence of sugar from time to time should be regarded as evidence of a weakness in metabolism rather than a normal sequence of dietetic errors.

Several times in insurance work I have found temporary glycosuria due to the eating of large quantities of strawberries with sugar and cream, or of candy or syrup. Again, glycosuria may be present intermittently in individuals of a rheumatic or a gouty diathesis and in some cases of gall-bladder disease with resultant pancreatitis and occasionally in pregnancy.

I have recently delivered a woman who

*Read before the Wayne County Medical Society, Nov. 7, 1904.

in her first pregnancy had albuminuria. Two weeks before full term, on April 1, 1903, labor was induced without mishap to mother or child, with no subsequent trace of kidney damage. The following November, after nursing the baby through the summer, she developed what seemed to be true diabetes, with increased appetite and thirst, prostration and loss of weight and passing large quantities of heavy urine loaded with sugar. With the usual dietetic modification and weaning of the baby, these symptoms disappeared entirely within 30 days and she remained well until July, 1904, when about 5 or 6 months advanced in her second pregnancy, all reappeared. Because of the defective proteid assimilation manifested in her former pregnancy, a proteid diet seemed contra-indicated and sugars alone were eliminated from the dietary; yet in about 60 days the urinary excretion became and remained normal in quantity and in constituents. She developed, however, a marked hydramnios, and on October 7 was delivered at full term of a dead and partly decomposed baby, its death unquestionably due to the disordered nutrition of the mother.

In beginning treatment of a diabetic, it is necessary first to ascertain for purposes of comparison either the percentage or total amount of sugar excreted in 24 hours, then by a test-diet free from carbo-hydrates and an accessory diet of definite amounts of carbo-hydrates determine the tolerance of the individual for starchy foods.

Thus we ascertain:

1. The percentage of sugar when uninfluenced by diet.

2. The effect of a diet containing no carbo-hydrates.

3. The tolerance of the individual for limited, definite amounts of carbo-hydrates.

In conjunction with the sugar-tests, the presence of the acetones, oxy-butyric and diacetic acids should be looked for.

The simplest test for these substances is as follows: Gerhardt's reaction for detection of diacetic acid.

To the urine a few drops of the chloride of iron (B. P.) are added, which generally causes a white precipitate of phosphates at first, which disappears on adding a little more of the perchloride solution, while the fluid becomes a dark brownish red or Burgundy wine color in the presence of diacetic acid.

Legal's test for acetone—To several cc. of urine in test-tube a few drops of a concentrated, freshly made solution of sodium nitroprussiate are added. The mixture is then made alkaline with liquor potassæ. A red coloration is produced which soon disappears, but when a little acetic acid is added a deep violet red coloration is the result if acetone is present. If acetone is absent, the urine has its usual yellow color after adding the acetic acid.

Oxy-butyric acid is a normal intermediate product of metabolism converted by the healthy body into more highly oxydized products and the appearance of acetones, other than faint traces, in the urine, denotes that the blood and tissues are over-laden with acids which the body is unable to convert and oxidize.

Von Noorden[1] states that never more than 1 decigram of acetone is excreted in 24 hours in the non-diabetic. Careful observation of the patient on a test in diet will lead to the grouping of each case into one of 3 classes[2].

I. Those excreting no sugar and no organic acids while on a proteid diet.

II. Those excreting a small amount of sugar and no organic acids.

III. Those excreting a *reduced* amount of sugar but organic acids when upon a rigid proteid diet.

Classes I and II are the cases amena-

ble to treatment, while class III, in which, in spite of the exclusion of all carbo-hydrates from the dietary, glucose in excess of consumption is still formed from the ingested proteids or fats or from the tissues of the body, and accompanied by the organic acids, will be found to contain the cases in which any kind of treatment is of little avail.

It must be remembered that in cutting off carbo-hydrates we take away the great energy-producing food, and no patient thrives well for any length of time on an absolutely non-carbo-hydrate diet. We should endeavor to supplement this loss of energy by the substitution of fats in excess, as butter, cream, olive oil and bacon, and by the use of alcohol, as sour wines, dilute whiskey or brandy, for its easily oxydized food value. A long-continued proteid diet usually produces diarrhœa which is an indication for the addition of some carbo-hydrates to the dietary. Saccharine should be used for sweetening purposes and fresh fruits which contain levulose, a sugar with difficulty converted to glucose, may be at times allowed in moderation. The green vegetables must be used somewhat to give variety to the diet; the least objectionable of these are water-cress, beet-tops or spinach, lettuce and celery. There is no satisfactory substitute for bread, the one food of all most craved, although some of the glutens on the market contains less starch than ordinary flour and may be tried. In most cases it is necessary to allow limited amounts of bread of any form agreeable to the palate. After the carbo-hydrate tolerance of the patient has been established, variety can be obtained by substituting other starchy foods for the daily allowance of bread, e. g., a potato, onion, turnip or some cereal. In this connection, let me call your attention to the recent diet-tables of Van Noorden[3] in which the carbo-hydrate equivalents, using white bread as a standard, of many of the desired starchy foods are given, making it possible to materially vary the dietary while knowing definitely how much starch is being ingested.

When the acetones are present, which are regarded as the precursors of diabetic coma, the indication is clear to limit the albuminous foods and neutralize the acid excess in the blood and tissues by large doses of alkalies in the form of sodium citrate or bicarbonate or in mineral waters. The hygiene of the patient requires careful attention, a moderate amount of exercise, frequent bathing and the protection of the skin by silk or woolen underwear being essential.

The medicinal treatment of diabetes may be dismissed in a few words. Nearly every drug in the pharmacopeia has been recommended, but the multiplicity of remedies used is the best evidence of their inadequacy or uselessness. Opium and its alkaloid, codeine, have been held to influence carbo-hydrate combustion but are of doubtful value and should never be used continuously. The solution of bromide of gold and arsenic posesses alterative properties which appear to aid metabolism. Pancreatin is worthless except as an aid to the digestion and absorption of fats. Indeed, from the standpoint of personal experience, there is no drug or combination of drugs from which we may expect any material permanent aid in the treatment of these cases.

By careful dietetic treatment, however, we can at least symptomatically cure the mild cases. (Class I), materially benefit and often keep alive for many years the moderate cases (Class II) and ward off complications and temporarily relieve the severe cases (Class III).

References:

1. Von Noorden. 20th Century of Practice. vol. 21.
2. Hart, International Clinics, 1904, vol. 3.
3. Von Noorden. 20th Century of Practice. vol. 21. (Supplement) Pages 146, 147.

99 Cass Street.

THE TREATMENT OF ALCOHOLISM.*

By WILLIAM J. STAPLETON, Jr., M. D., Ph. D.,
Detroit, Mich.
Clinical Assistant in Surgery, Michigan College of Medicine and Surgery.

My experience in the treatment of alcoholics has been mainly with those cases which have been admitted to the Detroit Emergency Hospital, where a large number of cases are treated annually. These range in form from an ordinary plain case of drunk to the most violent cases of delirium tremens.

Most of the cases are sent in by the Poor Commission from unfavorable surroundings, are poorly nourished and before entering the hospital their vitality is low and their strength exhausted. Beside the alcoholism we often find them suffering from some other acute infection which acts as a further drain on their vitality.

This explains why the mortality is so high in these cases and also the difficulty of satisfactorily treating cases of alcoholism. The idea of treatment is four-fold: First, to maintain strength of patient; second, to allay the extreme nervousness; third, to produce sleep; and fourth, to restore patient, if possible, to a normal condition.

In the cases of alcoholism we usually have the following history: Patient has been drinking for a period of from three days to several weeks and during this time has eaten very little.

The picture of the alcoholic with his incoherent speech, his stumbling gait, blood-shot eyes, tremor and in some cases a propensity to do damage to himself and others, with his unbalanced nervous system and a gastro-duodenal tract that is incapable of receiving or digesting food—is a familiar sight to every member present.

*Read before the Wayne County Medical Society, November 21, '04.

Now, what can we do to restore this man to his normal condition?

On entrance to the hospital his clothes are removed and he is taken to the bath room if possible and is given a hot bath at a temperature of 100-110 degrees F. for a period of from two to six minutes.

If it is an extremely nervous case where a bath would necessitate using too much force, the hot pack is used with the patient in bed.

The hot bath allays the nervousness, steadies the pulse, produces sweating and is usually followed by sleep.

The baths we find are much to be preferred to the bromides, chloral, hyoscine and drugs of a like class. Of course, in some cases they are necessary. The use of hydrotherapy in the treatment of alcoholism was suggested by reading Kellog's work.

In order to restore the lowered vitality it is necessary to get nourishment into the body, but if the bowels are constipated, as they usually are, it is of little or no use to attempt to give food until this condition is overcome and the congestion of the gastro-duodenal tract relieved.

This is accomplished by the use of calomel or mercury with chalk followed at a suitable interval by the saturated solution of magnesium sulphate.

For food we give hot milk clear, or with a little capsicum sprinkled upon it, or with a teaspoonful of the following prescription every three or four hours.

℞ Tinct. Nux Vomica.....ʒii
Tinct. Cinchona Co.....ʒiv
Tinct. Capsicum.....mxxx
Glycerin .....ʒii
Elixir ad.....ʒii
Mx.

Sig. ℥i in cup of hot milk every three or four hours.

The nux as a nerve tonic stimulates the heartheart and digestion by its action on the spinal cord, helping to give tone to the shattered nervous system, the cinchona compound with its serpenteria for their stimuli to the gastric mucuous membrane, the capsicum as a gastro-intestinal stimulant causing an increased flow of salivary, gastric and intestinal juice and also increasing the blood supply to and stimulating the walls of the stomach causing a sense of warmth which takes the place of whiskey.

The glycerin is added to prevent the precipitation of the cinchona compound.

Alcohol is rarely or never given these cases except where we have pneumonia complicating, or in old debilitated habitués—here we have found that alcohol is necessary to sustain the patient.

In the violent cases where restraint is necessary we use the leather muffler for the hands and anklets for the feet.

For the very violent cases or Mania-a-Potu instead of using the old so-called padded room where the patient has a chance to injure himself by throwing himself against the wall, we use a specially made wire box or cage 6½ feet long, 2½ feet wide and 2½ feet deep. The meshes are triangular in shape, two inches on each side. In the bottom is placed a mattress. The patient thus placed is unable to harm himself, is assured of plenty of light and air and can easily be looked after.

As soon as he becomes quiet enough he is placed in bed and the lighter restraint used, or if possible none at all.

Whenever restraint is necessary, a nurse is detailed to carefully watch the patient as the working of the patient to free himself may sometimes be so harmful as to defeat the object of the restraint.

Summing up the treatment I would say that in itself it is as follows: Get and keep bowels, kidneys and skin in good working order, restore lowered vitality by means of proper medication and food, produce sleep by means of hot baths if possible, avoid alcohol, except when indicated, and use restraint only when absolutely necessary.

176 Lafayette Avenue.

CYST OF THE BLADDER.

By C. M. HARPSTER, Ph., G., M. D.,
Toledo, Ohio.

Keyes says several varieties of cysts occur in cystitis, and they have some clinical significance.

The case which I have had, and will report in full, indicated its close connection with cystitis, and was of great clinical importance. Dermoid cysts occasionally occur in the wall of the bladder, and are diagnosed by the passing of hair, etc., in the urine. Echinococci cysts grow in the pelvis and burst into the bladder, but rarely develop primarily in the bladder wall.

*Written for the Detroit Medical Journal.

In all tumor or growths of the bladder hemorrhage is often present. Pain from the cystitis is usually present and cystitis is usually present before the first symptom of tumor appears. Inflammation is sure to occur, the tumor itself being especially prone to it. When once inflammation is present the only hope of overcoming the same is the removal of the tumor. Cystitis due to cysts is most distressing. Hemorrhage, usually present from or around the tumor, was not especially marked in my case.

Of all methods employed in diagnosis,

cystoscopy stands first in locating bladder tumors, for it alone tells the location, number, and condition of the tumors.

Two contra-indications for its use are, hemorrhage, so profuse as to cloud the field of vision, or excessive irritability of the bladder. In these two conditions irrigating cystoscopes and general anæsthesia must be employed. Although cysts of the bladder are usually multiple, in my case but one was found.

I suppose ordinarily intra-vesical excision by the electro-cautery snare is the best treatment for cysts of the bladder where too many are not present. I have been unable to find any data where simple incision was employed, as in my case. Excision can be employed in large cysts with thickened hardened bases after locating with the cystoscope. Resection of the bladder is indicated where cystic degeneration is of a malignant type or accompanied by malignant growths.

I do not believe that total extirpation is indicated for any cystic condition of the bladder. The tumor must invade the muscularis so extensively as to make complete eradication impossible. The implantation of the ureters following extirpation is a dangerous and serious operation, and it is almost impossible to remove secondary glandular involvement in any malignant condition accompanied by malignant cystic degeneration. Palliative cystostomy is about all that can be done, and leaves the patient fully as comfortable as the more radical procedure. Urachus cyst is very rare and is a congenital condition, not possible to have been present in this case of mine.

Parodi says cystic degeneration of the wall of the bladder is exceedingly rare. The patient whose case he reports had atheroma of the aorta, and peripheral arterial sclerosis, bronchitis and pulmonary œdema. The pelvis of the kidneys was normal, as well as the ureters and the uretha. The bladder walls were contracted, and presented a slight grade of cystitis, with marked cystic degeneration of the sub-mucosa. The cysts were the most frequent in the posterior-superior portion. On microscopic examination solid epithelial nodes were noticeable; with a tendency to degeneration in the center. Other nodes had become cystic by continuation of the degenerative process; the 'cavity' of the cysts was filled with an amorphous material and degenerated epithelium. The nodes and cysts were independent of the vesical epithelium, there was only a slight degree of inflammation of the mucosa of recent origin; there was nothing to account for the origin of the cysts from chronic inflammation; they had not the characteristics of true adenomatous formation; and they were not located in any one portion of the bladder, but distributed over its entire surface. I think it possible they were developed from the congenital epithelial defects in the bladder wall.

The case I wish to report was referred to me by one of our general practitioners.

A young single girl about 19 years of age, well nourished, previous history negative. For a number of months she had been suffering from what was considered a violent cystitis. Urination quite frequent and very painful. The case resisted all ordinary forms of treatment, such as irrigation of the bladder with nitrate of silver, permanganate of potash solutions, etc.

A cystoscopic examination was advised and made at my office. I found the uretha small, and the instrument was passed with considerable pain. The mucous membrane of the bladder was red, congested, and the region of the trigone violently inflammed. On the posterior wall of the bladder I found a mass as large as a hickory nut, which on close examination proved to be a cyst of the

bladder wall. I incised the cyst with a sharpened wire passed through the catheter canal of my cystoscope and evacuated its contents, and thoroughly irrigated the bladder with boric acid solution. A few irrigations were given of silver nitrate solution, and the patient made a complete recovery. I desired another examination with the cystoscope, and appointed a time for so doing. The patient did not appear, however, being satisfied with the result, and freed from her suffering.

705 Madison Avenue.

A recent issue of the Scientific American contains the following note on a new method of freeing the blood from toxic substances, recently presented to the Paris Academy of Sciences, by Dr. Charles Repin:

"By a special apparatus which he uses, he literally washes the blood by drawing off the serum and replacing it by an artificial serum formed of a saline solution. In this way the corpuscles are furnished with a fresh liquid and the serum containing the poisonous substances is eliminated from the body. To carry this out, the blood, which is taken by aspiration from a punctured vein, is at once mixed with eight or ten times its volume of a saline solution. The mixture is sent into a centrifugal separator which is so arranged that all the blood-corpuscles are collected at one point. They are taken from the separator by a pump which reinjects them into the system at once. The apparatus is entirely automatic and works continuously. It extracts the plasma with all the toxic products and replaces it by an artificial serum. No harm is done to the corpuscles, which do not suffer from their short passage to the outside. M. Repin's method has been applied at the Pasteur Institute. The apparatus is operated by a horizontal shaft which revolves at a high speed. The shaft carries four arms projecting at right angles and each arm has a conical chamber mounted on the end. The shaft and chambers are traversed by a system of tubes which allow three functions to be carried out: First, the blood mixture is brought into the chamber; second, the globules are separated and provided with the right amount of liquid for re-constituting the original volume; third, the surplus of the diluting liquid is drawn off. The apparatus contains a number of details which are necessary to prevent coagulation of the blood and make it work successfully. These will no doubt be illustrated in a succeeding description. By simply passing the blood through the apparatus all the operations are carried out automatically and the reconstituted blood is returned to the system, after having been washed entirely free from the toxic matter it may have absorbed. Dr. Repin is now demonstrating the physological effects of this method."

A joint meeting of the county societies of Saginaw, Tuscola, Isabella, Midland, Clare, Gratiot and Gladwin, was held at the Bancroft house, Saginaw, Mich., on December 6 last. Papers were read by Drs. Leartus Connor, of Detroit; J. P. Livingstone, of Caro; W. C. Marvin, of Millington; C. B. Burr, of Flint; and J. W. Meekin, of Saginaw.

A novel and practical use of the Roentgen rays is their employment in testing submarine cables for imperfections. A careful inspection by this means before the cable is laid has been found to be extremely useful.

Dr. Tobias Sigel, of Detroit, has opened a hydriatic and mechano-therapeutic institution at No. 66 Miami avenue, and has moved his office to the same address.

DETROIT MEDICAL JOURNAL

A MONTHLY EPITOME OF
PRACTICE AND THERAPEUTICS

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SUBSCRIPTION PRICE, $1.00 PER YEAR.
SINGLE COPIES, 15 CENTS.

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Address all communications to 103 and 105 Miami Avenue, Detroit, Michigan, U. S. A.

Vol. 4. DETROIT, MICHIGAN, DECEMBER, 1904. No. 9.

From the Standpoint of Personal Experience.

The editor has been enjoying the plutocratic paranoiac emotions accredited to the capitalistic class, having been sued for $30,000 for alleged malpractice, and has derived considerable pleasure from the thought that there existed men, even though not his friends, so confident of his present or ultimate professional success as to think that he would ever not only see, but even possess that much money. While in a contemplative mood during a vacation trip in the north woods undisturbed by patients and unfound by creditors the delusions of grandeur and opulence became marked and the temptation was strong to write a check for the sum asked and thus avoid the annoyance of contesting the suit.

But on reaching home with two dollars in his pocket and nothing in the bank, the mirage of grandeur disappeared before the sunlight of truth and although it was now hinted that a small sum would settle the case the editor clearly saw that he owed a duty to himself, to defend his professional reputation from unjust assault and also to his confrères to resist an attempt at blackmail which if acceded to would react tenfold upon them. Hence, despite a beautiful theoretical belief on the Biblical injunction to "Turn the other cheek," which advice was so clearly intended for the plaintiff rather than the defendant in this case, we promptly decided to assume the orthodox John L. Sullivan attitude and present both cheeks at once.

Briefly, this was the case:

In February, 1901, Dr. Tibbals was called by her husband to see Mrs. D. and found her suffering from peritonitis with a large pelvic abscess, which from the history given resulted from a tubal pregnancy, ruptured some weeks before.

She was removed to the hospital and watched for 60 hours while efforts were made to improve her general condition enough to justify a drainage operation. She was very tympanitic, with weak heart-action, high temperature, frequent chills and septic generally. At the operation, the uterus was curetted, the cul-de-sac opened, a large amount of pus and broken-down blood-clots evacuated and the ruptured tube with its ovary removed, all by the vaginal route.

The patient at first showed marked improvement, then retrograded and died six days later of general peritonitis.

When the case became hopeless, 36 hours before death, the husband found another physician who removed the patient to another hospital and after death clandestinely held a post mortem to find, if possible, evidences of malpractice.

No charges of malpractice were made however, until 2½ years later, when Dr. Tibbals sued in the Justice Court for his services when the defence claimed:

I. Error in diagnosis.

II. Improper operation.

III. Lack of husband's consent for operation.

The defence endeavored to show by the husband's testimony that the patient

was not ill enough to have had the condition disclosed by examination and confirmed by operation, and that anyway the operation was performed without his knowledge or consent. The physician whose short-sighted interference instigated all the trouble testified that he had had no experience in pelvic surgery, never having even a single case of tubal pregnancy under his care, but had seen two non-septic cases operated by abdominal incision; therefore all cases in which tubal pregnancy was the remote cause, no matter how septic, should be operated by the abdominal rather than the vaginal route. Further, that in this case his post mortem showed the uterus healthy, the tubo-ovarian stump healthy and the tissues about the uterus so healthy that he did not believe there had ever been a pelvic abscess.

There were two jury trials. The first jury disagreed as to whether the husband consented to the operation, the second jury gave judgement for the plaintiff for the full amount, answering affirmatively in writing questions covering all the facts of the case, as to the legal requirements of skill and care in diagnosis and treatment and the consent of the husband to operation. No appeal was taken from this judgement but instead a suit for $30,000 for malpractice was brought against Dr Tibbals in the Circuit Court.

When the case came to trial in October before Judge Donovan, of the Wayne County Circuit Court, the defence showed so clearly by the testimony of Justice Teagan and his documentary records that every essential point had been adjudicated in the lower court that the Judge directed a verdict for the defendant without further trial in accordance with the ruling of every Supreme Court in the United States before which this question has been raised, i. e., that when a physician in suit for services rendered has won against a defence of malpractice, no subsequent action for malpractice can be brought against him. In fact so firmly is the principle of *res adjudicata* fixed in American law that since the existence of the Michigan Supreme Court no action against a physician in which this principle was involved has ever come before it, hence should this case be appealed, as now seems probable, the opportunity will for the first time be presented of establishing as law in this state a doctrine which is fundamental in most others. The effect of a favorable ruling upon this question by the Michigan Supreme Court, would be to effectually prevent all such retaliatory blackmail as this case presents, and while neither a capitalist nor a philanthropist per se the editor proposes to stay in the game until the finish, happy that in defending himself he can be of service to his colleagues. This suit was brought but about two weeks less than three years after the alleged cause of action arose, barely coming within the statute of limitations.

It is to be hoped that Michigan, at the coming session of the Legislature may limit the time during which action for damages against physicians can be brought to one year, in conformity with some of her sister states.*

The profession is entitled to all the protection the law of the land affords against these malpractice blackmailers, because no recoupment or redress is here available for the annoyance or expense of a successful defence although the English courts require a guarantee of costs in malpractice cases and allow the doctor to make a counter claim for defamation of character in the event of his winning the case.

*See Detroit Medical Journal, Editorial, May, 1904.

Dr. A. D. Holmes, of Detroit, was welcomed home from a year of foreign travel and study by a dinner at the Detroit Club tendered by about 30 of his medical friends.

Medical Defence.

From the standpoint of personal experience, it appears that statutory limitation of time within which action for malpractice can be brought offers the most adequate protection to the physician. There are various corporations purporting for a considerable consideration to defend and protect the man unfortunate enough to require defence; but in our judgement no protective insurance offered by laymen for commercial purposes should long satisfy the profession. The profession must eventually protect itself through its medical organizations! No insurance policy as yet offered adequately protects the doctor under all circumstances, because, designedly, no policy is written broad enough to do so. The editor for example, has paid four annual premiums to such a company and yet defends himself because with this company a man must carry his policy the number of years allowed for suit under the statute of limitations of his state before he is fully protected by it.

What the profession wants is adequate defence during the time that the individual contributes his share to the expense fund, just exactly as life and accident insurance are written. While you pay you are protected, when you discontinue payment protection ceases.

The per capita expense of such defence within the profession itself would be far less than that now asked by the commercial corporations and the general utility of the plan for greater. Every state or large county society can offer its members adequate and timely defence at nominal cost and add the strongest sible incentive toward the growth and strength of their organization, i. e., the self-interests of the individual member.

The N. Y. State Medical Association and the Chicago Medical Society are doing this work successfully and the project is equally feasable elsewhere.

Such a defence organization for the members of a State Society scattered over a wide area of sparsely settled territory would entail greater expense for legal services at the outset than if the scope of the organization were limited to one county or group of adjacent counties; but wherever several hundred men can be organized into a compact Defence League, adequate protection can be guaranteed at an annual expense of not more than five dollars per capita. Wayne County, what about it ? ?

A Belated Inquest.

To those of our readers who have had access to recent Detroit newspapers it is not "news" to state that an inquest delayed until putrefaction had set in has been held upon the coroner's office of Wayne County and the remains yet await decent burial. An aged graft, at first exhumed for political purposes, emitted such a carrion odor as to attract public attention and no amount of disinfection and fumigation is as yet able to remove the stench.

Judging from the newspaper reports, it appears that corpses have been sold, valuables stolen, and the state robbed by the multiplication of inquests, post mortems and chemical analyses upon bodies of those sufficiently obscure to be classed as non-residents of the county, including new-born babies who had not lived here (or anywhere) six months. A post mortem has been distorted to mean a look at the body at thirty dollars a peek, although the only dictionary definition of the term is an autopsy or necropsy.

The *remains* in this case, however, will be subjected to something more than a look, for a simon pure autopsy is being held by county and state and the *subject* appears to feel pretty much cut up.

We recommend cremation of the *remains* at the hands of the Legislature as the quickest way of purifying the atmosphere and preventing survival of any of the putrefactive bacteria. The legitimate function of a coroner is to ascertain the cause of death when circumstances suspicious of foul play attend the case, a function equally well discharged by the prosecuting attorney's office with the assistance of the county physicians. Cremate the ancient graft!

EDITORIAL NOTES.

Several County Societies in Michigan have passed strong resolutions denouncing the recent action of the Regents of Michigan University in requiring the Medical Staff of the University Hospital to gratuitously care for all those of the well-to-do or wealthy class who come to the hospital for treatment.

Thus the State is placed in the ambiguous position of providing clinical material for its medical students, and squaring the account by an assessment, levied directly upon the clientele of the medical profession, an indirect taxation which is, to say the least, novel in this country. The abuse of medical charity is world-wide but so flagrant an abuse at the hands of authority has never before come to our knowledge.

Certainly a medical school must have clinical material, but to provide it at the expense of practitioners of medicine alone is rank injustice. A hospital whose minimum ward rate is seven dollars a week, as at the University Hospital, shuts out the poorer classes from among whom clinical material is legitimately drawn and makes a direct bid for the patronage of patients who can afford as well to pay for medical services as for hospital care.

If the dearth of clinical material at Ann Arbor is so great as to appear to justify such hot-house methods of propagation, then the medical department should be promptly removed to a location more adapted to its needs or else the education of recruits at the expense of the medical army be abandoned.

The December issue of the *Canadian Journal of Medicine and Surgery* calls prompt attention to a condition of affairs in Toronto that is somewhat startling. Some interesting correspondence is reproduced in this issue. Dr. James MacCallum, of Toronto, publishes a letter from Miss Edith A. Nainby, one of the teachers at Havergal Hall, a college in Toronto, advising him that the father of one of the pupils has asked that the pupil shall come under his professional care. She then goes on to say: "We can, I think, arrange this, subject to the usual condition that a discount of ten per cent. is deducted by the College off fees charged to the pupils."

Dr. MacCallum was naturally somewhat bewildered by the calm assumption that a discount must enter into the matter at all, and wrote Miss Nainby, asking her for the names of some of the professional men in Toronto who had attended pupils of the school under this "usual condition," and stating that he wished to talk the matter over with them. His answer to this was a note from S. S. Henderson, bursar of the college, stating that as the prospective patient was the only one who would attend Dr. MacCallum from that institution the doctor's name would not be added to the list of Staff of Specialists in connection with the college, and that, therefore, the question of discount did not apply in his particular case.

But this did not satisfy Dr. MacCallum at all. He proceeded to write to Mr. Henderson, pointing out to him that the matter was not a question of discount to

the pupil but of the commission demanded from the physician by Havergal College because the patient happened to be a pupil of that school. He winds up with the following body-blow:

"No reputable physician will so far forget himself as to receive or give a commission, or employ runners or touts, even in the guise of the authorities of Havergal College.

"I should have preferred to talk the matter over quietly with the physicians who have given commissions to the College, but your father to givehdhim.Henlege, but your failure to give me their names forces me to make this matter public, and it now becomes my unpleasant duty to bring to the attention of the profession and of the College of Physicians and Surgeons of Ontario the fact that such unprofessional and reprehensible practices exist in connection with Havergal College and its staff of specialists."

This is, we believe, something rather unique. Truly, colleges have gone into strange and devious ways here and elsewhere. It is more than remarkable that an institution of learning should degrade itself into a position where it is little better than a tout. And what of the physicians who submit to such an extraordinary and high-handed proceeding? We shall watch with interest to see what action the College of P. & S. of Ontario will take in this matter. We trust that it will be something worthy of the conditions.

Dr. H. W. Wiley, chief of the department of Agriculture's bureau of chemistry, read a preliminary report on the influence of adulterants and preservants of foods, at the last meeting of the New York Academy of Medicine. The text of this shows that even mild preservatives, like boric acid and borax, when constantly present in food, may have somewhat evil effects; these are shown in metabolic disturbance. The nitrogenous waste is lessened and the elimination of phosphates is increased. A lessening in weight on the part of those who have made frequent use of boracic acid and borax is noticeable, whether the consumption of them has extended over a long or a short time, when sufficient quantities are taken. The chief danger appears to be the possibility of irritating the kidneys. Nephritis in general is on the increase, and the introduction of boric acid into the system is naturally followed by increased work on the excretory system. This often loads the kidneys to a dangerous degree.

The ease with which sympathy can be worked up for even the worst criminals was illustrated recently in Maryland at a public hearing before the governor of the plea for pardon of a notorious abortionist who had at last been convicted, after many years of infanticide.

Despite his well known record, prominent business men, senators, congressmen, ministers and even a few physicians were induced to petition for his release from prison or even publicly plead for executive clemency. At last a weeping woman made her way forward and standing beside the governor, said: "I am the dead girl's mother! Don't pardon her murderer!" It is gratifying to know that this dramatic appeal of a broken-hearted mother outweighed all other arguments and the pardon was refused.

De Witt Clinton Wade, an old and honored member of the medical profession of Michigan, died at a hospital in Flint following an operation for appendicitis on November 4 last, aged 68. He was a member of the State Society for nearly 30 years and acting president of his coun-

ty society at the time of his death. The doctor was a notable figure at state society meetings, active in all medical affairs, and loved and esteemed in the community where he lived.

In his lecture before an audience of physicians and laymen in Chicago recently, Dr. Theodore Escherich, of Vienna, a noted pediatrist, described the results in 100 cases of treatment of scarlet fever by serum therapy. While he stated that it was not absolutely proven that a cure had been found, yet he felt justified in stating that the use of the serum invariably checked the progress of the disease, and when it was employed early enough practically aborted it. The serum employed was prepared from horses, but it was stated that much difficulty was experienced in securing a proper supply.

With that practicality which distinguishes so much of her activity, Chicago has established schools for instructing the public in first aid to the injured, with some of the most prominent surgeons in the city as instructors. There will be no charge for the instruction, which will be given in the form of fifteen lectures to the public. At the end of the course, examinations will be held, and certificates and badges will be awarded to the proficient.

Hackley Hospital, in Muskegon, Mich., was formally opened and dedicated on November 17. This magnificent and lasting memorial to its donor, erected at a cost of over $200,000, is three stories high, fire-proof, and occupies four city blocks. Its maintenance is assured by a liberal endowment.

A recent examination of the street sweepers in New York shows that out of a force of 1,872 men 283 were suffering from pulmonary trouble. Of this number, sixty cases are of consumption.

Dr. S. W. Abbot, secretary of the Massachusetts board of health, has published an optimistic pamphlet on the results accomplished in the fight against consumption in New England. He notes that the death-rate from the disease is now less than 20 per 10,000 living inhabitants, and attributes the good results to the open-air treatment, which is comparatively recent, but of great value, and to the general introduction of more careful ventilation. He feels that by thus improving the general health consumption may eventually be stamped out.

Col. W. C. Gorgas, of the medical corps of the United States army, now at Panama, has written a valuable pamphlet in regard to the best means of destroying the mosquito, particularly the so-called yellow-fever mosquito. This has been published by the government, and will be distributed throughout the country, especially in regions which are infested with mosquitoes. The directions are simple and easily carried out, and if public interest can be aroused, a great deal of good may be accomplished in furthering a very desirable end.

The editor of the Muenchener Medicinische Wochenschrift was recently sued for damages for calling a homeopathic physician practicing in Switzerland, "a charlatan," and was fined $37.50 and costs. Evidently homeopathy has little standing in Germany, although legally recognized.

At a recent meeting of the Kentucky State Board of Health rules were adopted prohibiting medical colleges from holding two school terms in one year. Heretofore students in Kentucky have been able to take the four-year course required in three years.

NEW INSTRUMENTS AND DEVICES.

Mention of new instruments and devices in this department is entirely complimentary and articles illustrated are judged on their merits.

We invite manufacturers and physicians to send us matter suitable for publication under this head. A description of the device and an electrotype or half-tone with a base not greater than two and five-eights inches should be sent.

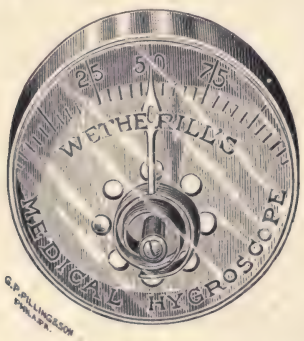
Always mention the price of the article in question.

The management cannot undertake to return cuts unless postage for same accompanies the letter with which they are sent.

To Our Readers—The Detroit Medical Journal publishes descriptions of such aids to the profession as it knows to be reliable and trustworthy. We shall be pleased to furnish information as to the articles mentioned, or the articles themselves, upon receipt of an inquiry.

The Hygromed.

This sensitive little instrument was designed by Dr. Henry Emerson Wetherill, M. D., for measuring the amount of moisture thrown off by the body in a given time. It is made of aluminum and contains a hygroscopic spiral which is acted



upon by the moisture in the air. It is so corrected that it will give the amount of perspiration secreted in five minutes. The bottom of the instrument is perforated and when it is laid over the portion of the body of which it is desired to make a test the moisture enters the aluminum box and the needle records the amount.

The uses of such an instrument from a diagnostic standpoint in conditions like uraemia and the fevers, where the dryness of the skin is an important symptom, may be seen to be many. Frequent tests of the instrument show it to be practically free from errors of record due to meteorological conditions.

In use, the instrument is placed on the body for five minutes, the skin having previously been wiped dry. Owing to its ease of application, moisture and temperature may often be noted without waking the patient.

The hygromed retails for $5.00.

Self-Retaining Abdominal Retractor.

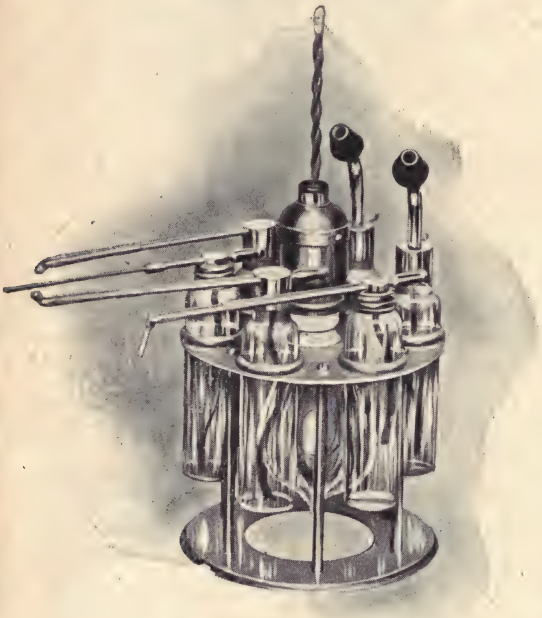
Dr. F. F. Simpson devised this retractor, the advantages of which are readily to be observed from an inspection of the

illustration published herewith. It is simple in construction and may readily be rendered aseptic. Used with one hand, it opens the wound widely, and once in position allows the surgeon's assistant the use of both hands. It may be placed in position, adjusted and removed as easily and quickly as a single retractor and it stays where it is put.

Its retail price is $10.00.

Electric Spray Heater.

The cut published herewith suggests at once the method of heating employed and the simplicity of the device as a whole. The idea was original with Dr. F. W. Alter, of Toledo, Ohio, and the stand is as convenient a thing as one can well conceive for the office of the nose and throat specialist. An ordinary 16-candle power electric bulb occupies the center of the stand and is surrounded by the atomizers and bottles containing the solu-

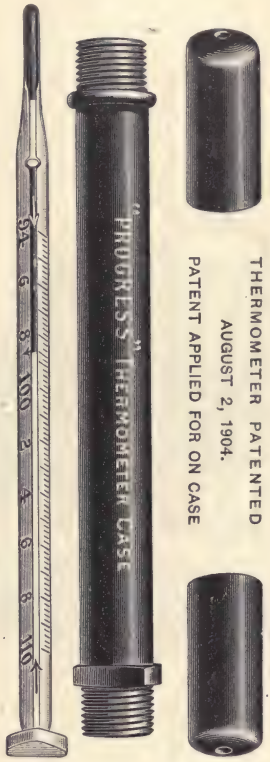


tions and powders used. When the lamp is lighted, a short time suffices to raise the temperature of the solutions to the desired degree of heat.

In the particular form of the device illustrated are shown four atomizers, one with a large bottle for washing solutions, two nebulizers and one powder blower. With the instruments, the device sells for $7.00. The stand alone costs $1.00.

"Progress" Clinical Thermometer.

By the addition of several ingenious devices, the manufacturers of this style of thermometer have made it much more convenient for the physician and the nurse. A nearer approach to asepsis is provided for by having a screw cap at each end of the case; these are partially



filled with cotton to protect the instrument, but the cotton may be easily removed and replaced with fresh. A pinhole in the end of each cap provides for the easy removal of the cotton as often as may be desired.

Two arrows on the mercury line of the thermometer are handy aids in gauging the focus and locating the mercury. Another useful addition is the triangular crown at one end of the tube. This prevents the instrument from rolling on an inclined surface and makes it easier to pick up from any surface. Another advantage of the crown is that when shaking down the thermometer with moist hands, or when the instrument itself is

wet, the crown prevents the instrument from slipping through the fingers.

These conveniences are added to a standard clinical theremometer, which will register in one minute, and which retails to physicians and nurses for $1.00.

Obstetrical Bag.

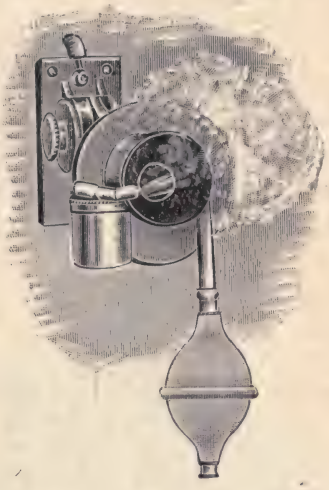
This aid to the obstetrician is divided into two compartments, the upper one furnished with loops for bottle tray, and

ample space for bandages, dressings, etc. The lower compartment, which is separated from the top by a stout partition, is held in place by straps and is large enough to contain a sterilizer and instruments. The Gilbert sterilizer, which is designed to fit in this compartment, is made of copper and lined with tin; it is fitted with a tray, and has folding feet which allows it to be placed on the top of a stove or over a lamp.

The bag itself is made in four styles, of the best material. The price runs from $6.00 to $11.00, and the sterilizer sells for $4.00.

Telephone Disinfector.

This is a sensible novelty, which is likely to appeal to physicians in hospitals or institutions in which a telephone instrument is used by a number of people indiscriminately. The transmitter of a telephone is naturally exposed to many germs and bacteria, which find a convenient lodgement there. Anyone who



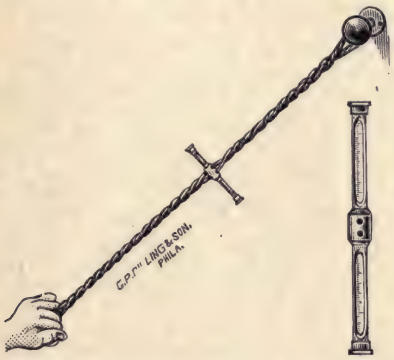
has made much use of a public 'phone knows that there are often reminders, not always pleasant, of the man who has just preceded him. A few vigorous compressions of the bulb attached to this device will fill the transmitter with a cloud of disinfectant and deodorant vapor. The vaporizing material is contained in a small reservoir, and with the instrument comes a bottle of disinfectant sufficient to last for several months.

The device, complete with disinfectant, retails for the sum of $1.25.

The Torkrit.

Henry Emerson Wetherill, M. D., is the designer of this instrument, which makes use of the whirligig principle, after the same fashion as that employed by jewelers in bow-drilling. By counting the twist of the cord, the number of pulls per second, with the necessary force, the number of revolutions will be shown to be about three times as many as with the old-style haematokrit. The instrument,

therefore, works much more speedily. It is portable, light, compact and free from danger and the parts are made to include

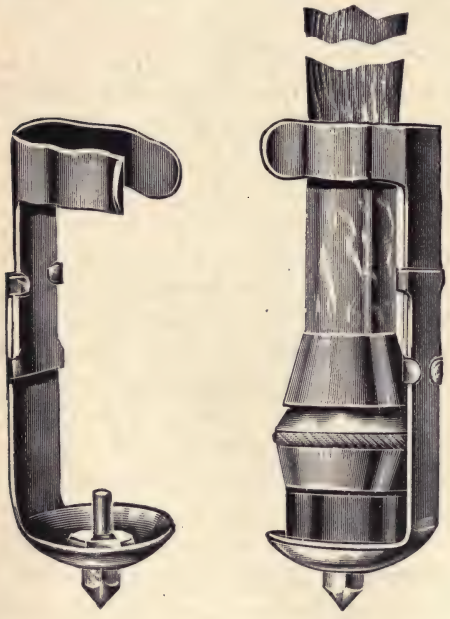


the desirable factors of safety and accuracy.

The instrument sells for $2.50.

Crutch Calks.

Everyone who has prescribed crutches knows from experience that one of the



first complaints from the patient is that there exists a feeling of insecurity and a dread of slipping. This may readily be overcome by the use of the device illustrated. The calks are applicable to any style of crutch and are readily slipped over the rubber. When in a house or other building, they may be released immediately with a single motion.

The calks come in three sizes, small, medium and large, and sell for 50 cents each.

A suggestion that has every mark of practicability was made by Maj. Azel Ames at the meeting of the International Congress of Military Surgeons in St. Louis recently. The major suggests the establishment by the government of a school for instruction of medical men as to the duties of surgeons in war time. He was a veteran of the great struggle and of the Spanish affair, and he spoke from his own experience when he said that the volunteer surgeon was suddenly taken from civil practice and placed in the responsible position of surgeon with troops in the field, without sufficient knowledge or training to enable him to meet the changed conditions. The special needs of soldiers are matters which require an abundance of study, as any army surgeon knows, and Maj. Ames is right when he insists that some standard of instruction is a thing greatly to be desired.

The funeral of Dr. Hamilton E. Smith was held from his late residence, 50 Lafayette avenue, on October 11 last. Interment was made in Ann Arbor. The active pall-bearers were: Dr. E. S. Sherrill, Dr. Guy L. Connor, Dr. F. B. Tibbals, Dr. B. P. Brodie, Dr. Nathan Jenks, Dr. B. R. Schenck.

Dr. L. Duncan Bulkley started a sixth series of clinical lectures on diseases of the skin in the out-patient hall of the New York Skin and Cancer Hospital on November 2. The series will be given on Wednesday afternoons at 4:15, and the course will be free to the medical profession.

PROGRESS OF MEDICAL SCIENCE

Retinal Hemorrhage as the First Manifestation in a Case of Diabetes.

Nagel (*Ophthalmic Record*, October, '04), discussing ocular symptoms in the diagnosis of diabetes, believes that it rarely occurs that emaciation and general decline have not begun before the eye exhibits any manifestation of the disease but cites a case of his as an exception.

Patient, a woman aged 73. Had occasional attacks of asthma, but otherwise healthy and strong. Left eye was operated on eighteen months previously for acute inflammatory glaucoma and has remained well ever since. Vision slowly improving. There was no abnormal hemorrhagic tendency either before or after operation. About 13 months later glaucoma set in in the right eye, as evidenced by a narrowing of the visual field of that eye. A couple of months later, vision began to fail right eye. Ophthalmoscopic examination showed around the posterior pole of the bulb in an area of about 3 papilla breadths there were a number of small, roundish, pale red, fresh retinal hemorrhages not in general lying closely to the vessels which latter presented no alterations as to caliber, blood column, etc. Papilla and vitreous body normal, as was also the rest of the eye. There were no white spots of any kind in the retina.

Urinalysis showed 0.5 per cent. sugar. Subsequently, hemorrhages have increased in number and in size and a cataract has begun to develop.

The Relation of Pancreatic Inflammations to Cholelithiasis.

Mayo Robson (*Dominion Medical Monthly*, October, 1904), says that while we frequently find cholelithiasis without pancreatic troubles, inflammation of the pancreas without common duct cholelithiasis is rare, because of the junction of the common bile duct and the duct of Wirsung at the ampulla of Vater and their common opening into the duodenum.

Pancreatitis is probably always a secondary disease, resulting from infection from the common bile duct or the duodenum, and occurs in about two-thirds of the cases of common duct disease for the anatomical reason that in those cases the duct passes through the pancreas, and its obstruction or distention by a stone causes pressure upon the pancreas and interference with its function and the discharge of its secretions.

Since both the common bile duct and the pancreatic duct empty at the ampulla of Vater it follows that usually when a gall-stone passes along the common bile duct and reaches the ampulla of Vater, it will not only occlude the bile passages, but also the chief excretory duct of the pancreas, the secretion of which will be retained. Should infection occur, pancreatitis becomes inevitable, and on the condition of the individual, as well as on the nature of the infection, will depend what occurs, whether a mild catarrh of the pancreatic ducts, an interstitial pancreatitis, an extremely serious suppurative catarrh, or a parenchymatous inflammation in the shape of acute pancreatitis.

His method of exposing the head of the pancreas and the common duct at operation is as follows: Place a firm sand-bag under the back opposite the liver, which pushes the spine, and with it the pancreas and common duct, forward and also

lets the other viscera fall away from the operative field.

Make a vertical incision over the middle of the right rectus, separate the fibres with the finger and if it be found necessary to open the common or the deeper part of the cystic duct carry the incision upwards to the interval between the ensiform cartilage and the right costal margin as high as possible.

Now by lifting the lower border of the liver the whole of the gall-bladder with its ducts is brought close to the surface, and within easy reach. Early surgical treatment of gall-stones is the best preventive of the serious complication of pancreatitis.

Rectal Use of Hypnotics.

Manges (*Medical News*, September 24, 1904), advocates the rectal use of the newer hypnotics for their indicated purpose where the condition of the stomach prohibits their use in the usual way. Instances often arise, especially following operations, where morphine is contra-indicated or adds to the existing nausea, but where the rectal use of sulfonal, trional or veronal promptly induces the needed rest. He found that all hypnotics are not equally active, since hedonal, chloralose and chloretone were so slightly soluble as to be practically worthless in this connection; on the other hand, sulfonal acted much more powerfully than trional. Heroin, chloralamide and phenacetin were also readily absorbed. The use of combinations of sulfonal, or trional, sulfonal and phenacetin gave excellent results.

These drugs should be given in suppository form, in dosage slightly increased over the usual dose per month.

Veronal is so freely soluable that it may be given in solution in warm milk or diluted sherry, the rectal dose for an adult being 15 to 20 grains.

Early Physical Signs of Tuberculosis.

Lawrason Brown (*Medical News*, October 15, 1904), from a study of 201 incipient cases, draws the following conclusions:

1. Absence of physical signs in the chest is no better proof that a patient has not pulmonary tuberculosis than absence of tubercle bacilli in the sputum.

2. Tubercle bacilli occurred in the sputum of only 71 (35 per cent.) of 201 incipient cases.

3. Auscultation is by far the most important method of physical exploration in incipient pulmonary tuberculosis, with inspection (including mensuration) and percussion of nearly equal importance. Palpation is of less value.

4. Ausculation should be practised before the patient is made to breathe deeply, as otherwise fine crepitation may be overlooked.

5. In many incipient cases little or no deformity of the chest exists. In a majority of the cases the chest is well developed, though possibly a trifle long, with a slight prominence of the clavicle on the affected side.

6. The intercostal spaces and angle as well as Louis' angle are in the majority of cases normal.

7. The movement of the chest as noted by inspection is in the majority of cases restricted on the affected side. Restriction of movement on the unaffected side is by no means uncommon.

8. The lower part of the affected side shows in some cases an exaggerated movement on inspection, which may be of value in certain cases.

9. The vocal fremitus was normal in two-thirds of the cases and was three times more apt to be increased on the affected than on the unaffected side.

10. Direct percussion upon the clavicle has not proved of much value in these cases.

11. Some degrees of dullness may occur without change in the auscultatory signs.

12. Percussion and radioscopy seem of nearly equal value in determining the movement of the base of the lung. Radioscopy has a distinct advantage in deep-seated lesions; percussion, possibly, in "pleuritic" cases.

13. Some deficiency in vesicular murmur was present in 41 per cent., while râles occurred in 70 per cent. of the cases in the relative frequency of fine, medium moist, rhonchi and mixed.

Complications following Cataract Extractions in Glaucoma.

At the Denver meeting of the American Academy of Ophthalmology and Oto-Laryngology, Dr. Louis J. Goux, of Detroit, read a paper with this title, abstracted as follows in *The Ophthalmic Record*, August, 1904.

"Dr. Goux described a case of glaucoma in which it was decided to do an iridectomy and cataract extraction in the hope of relieving the glaucoma and restoring the vision in the left eye. The operation was done under cocain anæsthesia, and as the primary incision was completed the lens followed the knife through the wound, the intraocular pressure being so great. There was considerable escape of vitreous, and the collopse of the eye-ball was so complete that no attempt was made to perform an iridectomy. There was some intraocular hemorrhage following operation, and on the fourth day the dressings were wet with a serous exudate, examination revealing a small sinus on the apex of the corneal cicatrix. The vicarious channel still exists, vision is *nil*, and the eye evidently doomed to phthisis bulbi. To the writer the most logical prophylactic measure that suggests itself is that of scleral puncture, whereby the tension may be sufficiently reduced to bring about a return of the anatomic relation of the parts, and making the steps of iridectomy as easily performed as under normal conditions."

Extraction of Anterior Capsule in Cataract Operation—Morphia Hypodermatically in Simple Extraction.

Dr. Eugene Smith, of Detroit, (*ibid*) read a paper under the title given, and at the same time showed a cataract forceps he had devised. It was abstracted as follows:

"He advocated the extraction of the anterior capsule in any form of cataract extraction. Seventy-five per cent of the ordinary cystotome operations on the capsule require discission later, but such is not the case when the capsule has been removed. Dr. Smith said he had never failed to grasp and remove a large segment of the anterior capsule with his forceps, and with them he has never dislocated a lens. Many times the lens has been removed in its capsule. and never with the loss of vitreous. The forceps, as made by Luer, of Paris, contain four teeth on one blade and five on the other. These are set on the curved portion of the blade and only their points made sharp. The curve is located about two mm. from the ends of the blade, and is so gentle as not to interfere with the introduction of the forceps into the anterior chamber.

"Regarding morphia hypodermically, Dr. Smith said it was as a myotic, superior to eserin, and the liability to prolapse is lessened by its use. Then, too, the discomfort suffered will cause an unconscious effort to keep the eyes still, which may cause prolapsus by contraction of the orbicularis muscle, all of which is overcome by the use of morphia."

Notes on Ointments.

L. Duncan Buckley (*Jour. A. M. A.*, August 20, '04), in a practical paper on

ointments, sums up the indications for their application as follows:

It is not always an easy matter to know just the exact indications for the employment of this or that kind of strength of ointment, or for any ointment, in preference to some other kind of dressing, and disappointment will occasionally follow the best directed efforts. In some acute inflammatory conditions of the skin lotions and powders suit far better than ointments of any kind, while in the more chronic conditions, with dry, rough skins, ointments are, of course, called for.

The exact kind and strength of ointment can be determined only after a careful study of the skin, lesions present, and their acute or chronic state or condition, and also after a full appreciation of the character of the skin of the individual under treatment.

In general, a thin, delicate skin, especially in one with a light complexion and hair, will bear and require much milder applications than a thick, tough skin, especially in a brunette.

The single or localized patch of chronic eruption will, of course, bear and require much stronger applications than an acute or generalized eruption. While the sensations of the patient will commonly determine the continuance or disuse of an ointment, and great harm is not often done by too strong applications, our efforts should undoubtedly be directed to securing an application which will be effective and accomplish the end desired, if that be at all possible.

Every point in a case should, therefore, be carefully weighed and the indications and contraindications looked for and appreciated, before determination is made as to the proper ointment to apply. The almost universal use of zinc ointment is largely explained by its relative harmlessness, on the principle of the Irishman's holy water, who explained that, "if it does you no good it will do you no harm." This, however, is a poor principle to go on in the treatment of diseases of the skin, which often require very active measures for their removal; and, as before remarked, he is very poorly equipped for their treatment who knows only zinc ointment.

In concluding these brief practical notes on the use and abuse of ointments, for the general physician, I must utter the caution that we have been considering only one side of the great subject of the treatment of diseases of the skin, and one which is often the least important. All local measures are constantly found to be ineffective unless proper and adequate internal and general treatment is adopted and earnestly and faithfully carried out.

Acute Pancreatitis.

Miles F. Porter (*American Medicine,* August 13, 1904) reports a case of acute suppurative pancreatitis with death in 66 hours. His case was characterized by acute abdominal symptoms of an obscure type, the diagnosis being made post mortem. The patient had been having boils for some weeks prior to her final illness, which explains the probable mode of infection of the pancreas.

Chicago has another practical enterprise to her credit in the American White Cross First Aid society, recently organized. This body has for its object the delivering of lectures to the public on first aid to the injured. The names of Drs. John B. Murphy, Nicholas Senn and R. N. Foster appeared on the request for a charter.

The New York state Legislature has refused to vote the annual appropriation to the state laboratory for cancer research, maintained in Buffalo under the direction of Dr. Roswell Park, on the ground that the results so far obtained do not justify the large expenditure of money.

BOOK REVIEWS

Blood Pressure, as Affecting Heart, Brain, Kidneys and General Circulation. A Practical Consideration of Theory and Practice. By Louis F. Bishop, A. M., M. D., Physician to Lincoln Hospital and French Hospital, New York. 12mo., Cloth, $1.00. E. B. Treat & Co., 241 W. 23rd St. New York, Publishers.

Dr. Bishop's book springs from his observations, extending over a considerable period of time, of the increasing prevalence of circulatory disease, which he rightly regards as a grave menace to the general good, inasmuch as those suffering from these maladies are often men high in position and capable of doing a great amount of good in the community. Owing to the comparative mildness of the symptoms which surround a condition of high arterial tension, patients often pass into an advanced stage of the disease before they apply for professional relief. Dr. Bishop emphasizes the clinical relations of blood-pressure as interpreted by clinical work. This is a side of the subject which is perhaps sometimes overlooked, in spite of its importance.

So much for the *raison d'être.* In the text the author has employed language that is to be commended both for its practicability and its clarity and he presents a number of points which are well worth the attention of the medical profession. He is thoroughly conversant with his subject and his suggestions for the management of various cases are those of the experienced worker. There is much food for thought in the little book.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. Kelly, A. M., M. D., Philadelphia, U. S. A., with a large Staff of Collaborators and Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Vol. III. Fourteenth Series, 1904. Price, Cloth, $2.00 Net. J. B. Lippincott Company, Publishers, Philadelphia, 1904.

Considerations of syphilis occupy nearly one-half the space in the present issue of the series, a series which, by the way, appears to grow in interest and value with each succeeding volume. Spiller, Ballantyne, Gottheil and others contribute papers on syphilis, and several new points of view are discovered. Syphilis and suicide forms one interesting paper by Fournier, and hypodermatic treatment of the disease comes in for a share of consideration. Under the general head of treatment the best methods of care in digestive disturbances of tuberculosis, chronic constipation and diabetes are taken up and under "Medicine" Louis F. Bishop has a valuable clinical lecture on diseases of the liver.

Drs. Lermoyez and Guisez report some cases of foreign bodied in the bronchi, among them the first successful removal of an obstruction by the aid of Killian's method of bronchoscopy done in France.

Francis H. Davenport has some suggestions to make on non-operative treatment of menstrual disorders and F. W. Langdon has a paper on paralysis agitans.

Refraction and How to Refract, Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-

Glasses, Etc. By James Thorington, A. M., M. D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine; Member of the American Ophthalmological Society; Fellow of the College of Physicians of Philadelphia, Etc. Third Edition. Two Hundred Fifteen Illustrations, of which Thirteen are Colored. Pages, 306. Price, Cloth, $1.50 Net. P. Blakiston's Son & Co., Publishers, 1012 Walnut St., Philadelphia, Pa., 1904.

If a book on refraction runs into three editions within the period of four years, it is an indication that it has reached an appreciative, if necessarily small, circle of readers. This distinction has been accorded to the work of Dr. Thorington, who is well known as a teacher and a writer. In the present form of the book the author has gone carefully over the text, making some changes and improvements, and has added besides fifteen new illustrations, together with a description of several new instruments that have recently come into notice for use in estimating refractive errors.

Dr. Thorington's text is lucid and concise, two excellent qualities in text-book writing, and the subject-matter's own value is materially enhanced by the illustrations, which are unusually numerous and valuable. The present edition should meet with the same kindly reception accorded its two predecessors, and no doubt it will have that deserved good fortune.

The Urine and Clinical Chemistry of the Gastric Contents, the Common Poisons and Milk. By J. W. Holland, M. D., Professor of Medical Chemistry and Toxicology, Jefferson Medical College of Philadelphia. Forty-One Illustrations. Seventh Edition, Revised and Enlarged. Price, $1.00 Net. P. Blakiston's Son & Co., 1012 Walnut St. Philadelphia, Pa.

When a physician's book has reached its seventh edition, it should generally be considered to have been proved valuable, and it is certain that Dr. Holland's work has stood the test of examination excellently well. In its present form it is still the practical manual for the conscientious student, and a glance at its table of contents will show the scope of the work: Examination of morbid wine; examination of gastric contents; examination for common poisons; study of normal milk. All these subjects are taken up with sufficient detail to cover the field, without undue attention to comparatively minor matters. The question of urine examination very properly takes up nearly one-half the text, and is practically exhaustive. Tests for sugar and albumin are given in abundance, with the technique cleverly suggested, and provision is made, by leaving alternate pages blank, for careful notes by the student on the work he has been doing. This is a feature that especially adapts the book for laboratory work, and, as we have said before, it has proved a most popular form of laboratory manual with instructors and students alike.

The Medical News Visiting List for 1905. Nineteenth year. Issued in Four Styles, Weekly, Monthly, Perpetual and 60-Patients. Printed on fine, tough paper in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years, $1.25. Thumb-letter index, 25 cents extra. By mail, postpaid, to any address. Lea Brothers & Co., Publishers, 706-710 Sansom St., Philadelphia, Pa.

To many and many a practitioner, this visiting-list represents exactly what is wanted. Its publishers have devoted a number of years to catering to the taste of the professional public with a visiting

list especially adapted to their needs and for some time past they have been turning out a most convenient form. The old and admirable plan of division for accounts has been retained and the text portion has been revised and brought up to date. Useful tables on topics of interest are published, together with numerous useful therapeutic hints. Every practitioner may find the type of book best suited to his individual needs in the numerous styles published by Lea Brothers & Co., and he will get one of the best if he secures one of theirs.

The Physician's Visiting List (Lindsay & Blakiston's) for 1905. Fifty-fourth year of its publication. Price, $1.00 net. P. Blakiston's Son & Co., Publishers, 1012 Walnut St., Philadelphia, Pa.

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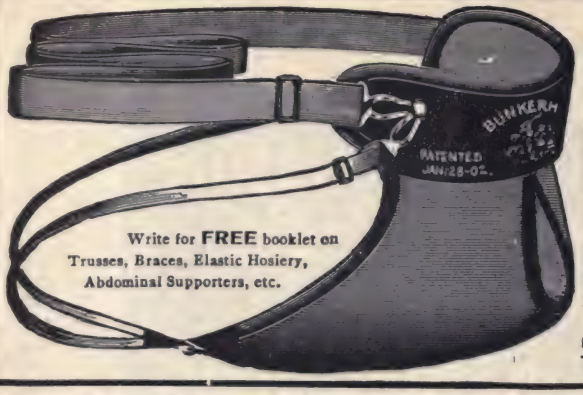

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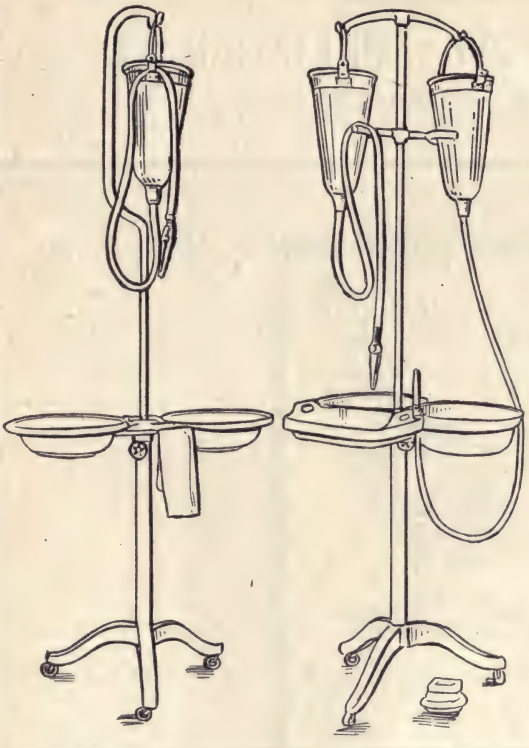

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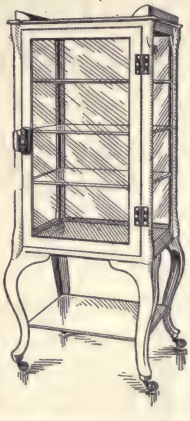

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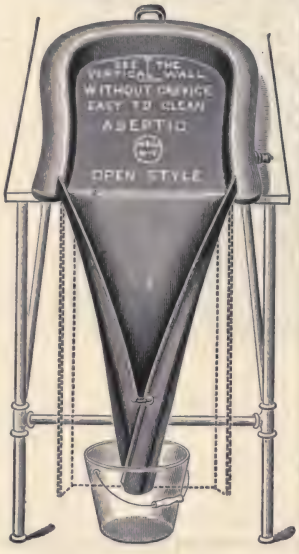

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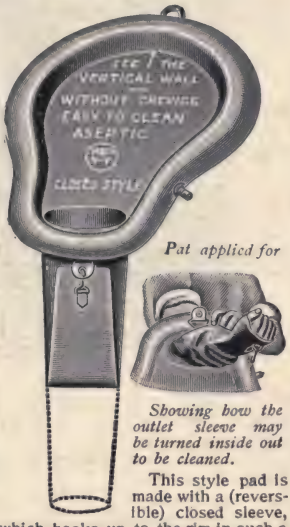

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The Importance of Sustaining the Vital Powers, with Illustated Cases.*

By LAFAYETTE BENNETT, M. D.
Central City, Ky.

An eminent teacher of medicine, in a lecture to his class of students, declared that the greatest difference between the therapeutic methods employed by our forefathers and ourselves consisted, most of all, in the fact that the intelligent physician of today fully comprehended the importance of conserving the strength of his patients—the maintenance of their resisting powers. The maintenance of these powers is the key to the situation, and failure to recognize its importance is responsible for the greatest number of unfavorable issues. This principle applies alike in all disease processes—acute or chronic.

Osler, in the chapter on treatment of tuberculosis in his work on practice, says that there are three indications for treatment, and the FIRST is: "To place the patient in surroundings most favorable for the maintenance of a maximum degree of nutrition." This may be said to be a principle, applicable not only in the treatment of tuberculosis, but of all morbid processes. Phthisis is an affection in which the waste of tissue exceeds its nutrition—but only a moment's reflection is necessary to bring to the mind of the practitioner the fact that in other—and in truth, all—diseases there is a greater or less degree of interference with normal metabolism. It is the attention to this point that renders one physician successful in a certain class of diseases. If, in the management of pneumonia, typhoid fever, or any disease where tissue-waste is marked, the maintenance of the resisting power is lost sight of, the outcome of the case will be unfavorable. There is no more successful way to combat disease germs than by keeping the patient well nourished. All competent observers have laid stress on the fact that "seed and the soil" are both necessary. This is true, and explains why well-nourished persons often escape being striken with disease, and, on the other hand, why others are so susceptible. This principle is now applied to treatment, and is to go hand in hand with the administration of such drugs as have been found of service.

Bovinine contains all the nturitive elements. It is live, defibrinated blood, sterilized, and preserved by a cold process. I have found that by the regularadministration of bovinine I could keep up my patients nourished, the pulse volume would be kept good, and they would more quickly recover than when other means were used, to maintain the vital resisting power. Vital resistance is dependent upon nutrition, and if this is attended to we may expect the most favorable results possible.

I now depend upon the virtues of bovinine with the utmost confidence and give it regularly from the incipiency of attacks of all diseases which are in their nature serious or protracted—as pneumonia, typhoid fever, etc. Bovinine should be begun, as already stated, at the incipiency of disease processes, and continued until the patient has advanced so far that he can take food normally. Bovinine should be given at first in doses of a half-teaspoonful in half-cupful of milk, every three or four hours, and this quantity is to be constantly increased. I gradually increase it until the patient takes a tablespoonful every three or four hours.

A lady, aged 25, who was ill of grippe, sent for me. She had had an attack of otitis media several weeks before, and this had left her somewhat anaemic, and generally below par, physically. She had a temperature of 103 per cent F. when I saw her and a pulse of 140. She also had bronchitis, which was attended with an agonizing cough. She had eaten nothing for several days and felt greatly debilitated, and she was also greatly discouraged. I put her on bovine (in the dosage advocated above), gave her quinine and salol, together with a cough mixture. On this treatment my patient made steady improvement after the firs day, and I was able to discharge her in a week. In view of the fact that this woman's physical condition was at low ebb, I think this result was one which emphasizes the importance of maintaining the resisting powers by the regular administration of bovinine.

In many cases like this it is common for patients to have anaemia for a protracted period, or if, as in this instance, the patient had bronchitis, it generally becomes chronic. All of us are familiar with such cases.

A child aged 18 months was taken ill with enterocolitis. The parents had given it chalk mixture and such other domestic remedies as are known to the laity. I saw it after the disease had been in existence for several days. The little patient had no appetite. It was a bottle-fed baby, but would take scarcely any milk. I put this patient on subnitrate of bismuth and had it given bovinine in doses of from 2 to 5 drops every two hours stirred in some milk. This acted happily in giving the patient strength, and he made a complete recovery in a short period of time. I place great reliance on bovinine in the treatment of the intestinal disorders of infants. It increases their resisting powers, and, of course, greatly shortens the duration of the disease.

A lady, aged 25, having pneumonia, attended with pleurisy, with high temperature range, sent for me. I had only lately advised this woman to wean her well-nourished baby, because she complained of nervousness and was apparently anaemic. I relied to the largest extent in treating this disease upon bovinine, which I gave regularly and continued throughout the illness. This patient, although many untoward factors were present, made a complete recovery in the average time. The result is logically the outcome of the regular administration of bovinine and the support which this agent gave to the resisting powers.

A man who had tertiary spyhilis and who got no good results from iodide of potassium, was, on the general principle stated in this article, put on liberal dosage of bovinine. On this agent his general health improved, he could retain the specific drug, and got along well.

Acute Stomatitis.

By J. CAMBRIDGE WHARTON, M. D.

The patient, a male, twenty-nine years, was admitted to this hospital December 14, 1896, after a debauch of some weeks.

On admission his mouth and tongue were found to be covered with irregular, gray, dirty looking ulcers; the tongue was much swollen, soft and flabby, showing the imprints of the teeth.

There was extreme salivation, constant dribbling from the mouth, irritating the skin of the chin. The tongue showed many fissures and one especially deep, extending from the base to the tip. The breath was very foul and offensive; there was pain on swallowing, and a slight rise in temperature. Naturally there was little desire for food, for lack of taste and the bowels were very inactive. There was no glandular involvement and there seemed to be no complication in the case whatever and no doubt the trouble was induced by the excessive and long use of alcohol.

The treatment consisted solely of GLYCO-THYMOLINE one part to four of water, a teaspoonful of the mixture being given every two hours. Locally the mouth was washed frequently with GLYCO-THYMOLINE diluted with two parts of water. The effect of this treatment was marked from the first dose and in five days the patient was discharged from the hospital fully recovered. While this case seems like a very simple one it is instructive from the fact that the recovery was so rapid.

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Attention has already been called elsewhere to this extremely simple and practical method of determining the percentage of hemoglobin in the blood. In view of the importance of this test in its diagnostic aspect, any simple and effective method that will arrive at correct results with a minimum of effort is well worthy the attention of the medical profession. This excellent device is simplicity itself; fifty sheets of perfectly white absorbent paper are bound in book-form, together

with a scale of ten standard tints corresponding to the color of the blood-stains, the hemoglobin values ranging from 10 per cent. to 100 per cent., from 90 to 100 being regarded as normal. The sheets are perforated, and provision is made for 150 examinations, which should be made as soon as the stain has lost its first gloss and before it is thoroughly dry, using ordinary reflected daylight. By means of this method, determination within 10 per cent. are readily made, a percentage of errors less than that found in the more expensive and cumbrous hemometer or the hematocrit.

The scale, which sells for fifty cents, is handled by Edward Pennock, 3607 Woodland Avenue, Philadelphia.

Every Physicians Knows.

In the NORTH AMERICAN PRACTITIONER, under the head of "Intestinal Antisepsis," reported by Dr Pettingill, of New York City, we find some excellent experiences from which the following is selected:

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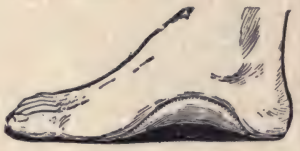

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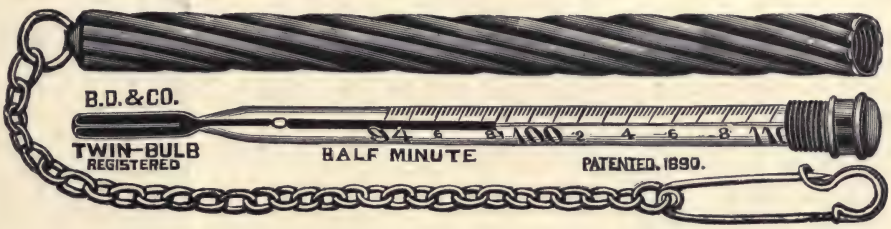

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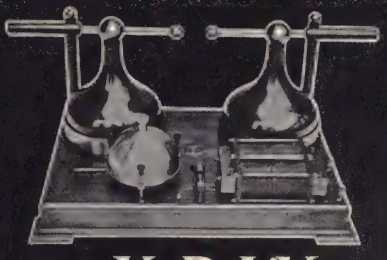

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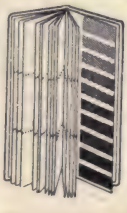

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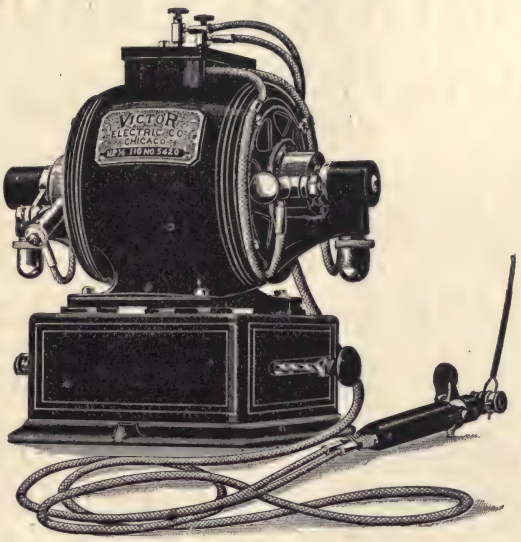

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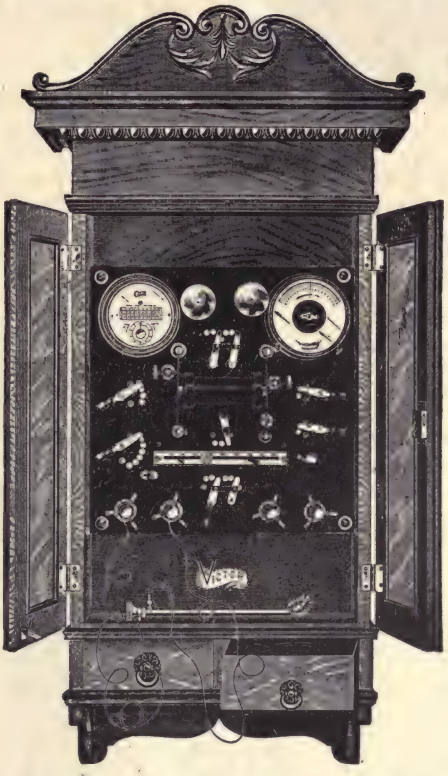

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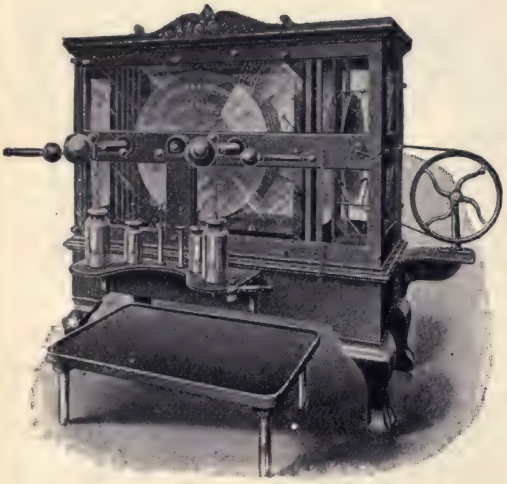

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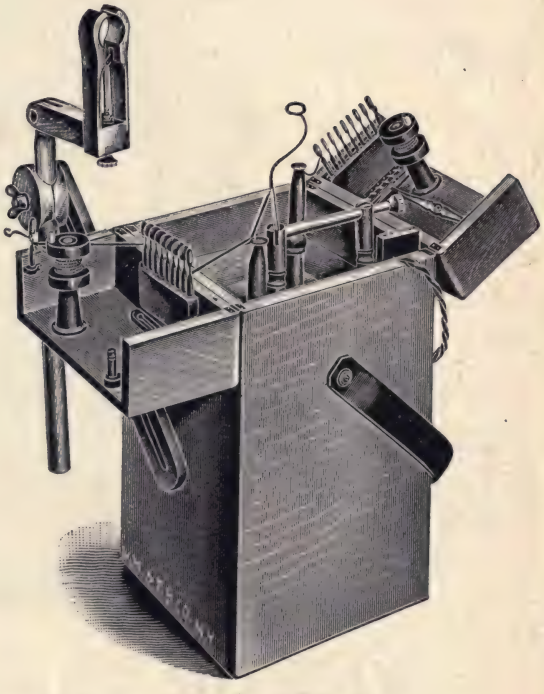

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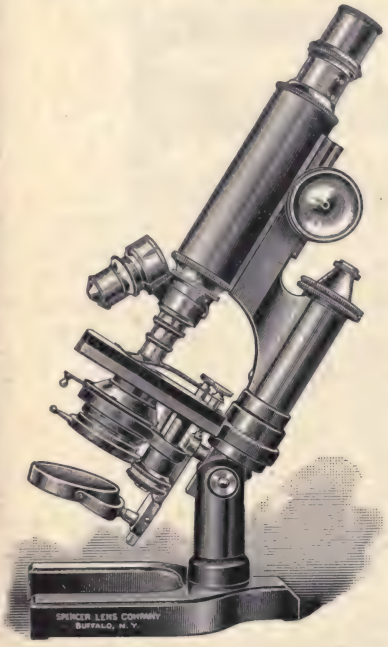

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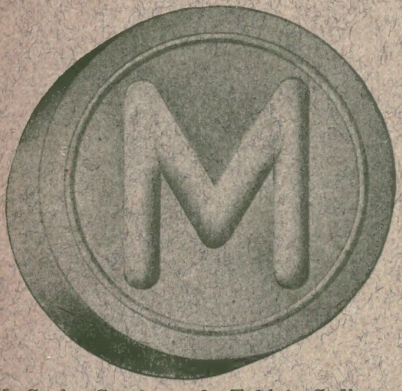

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